Vaccines and Global Health: The Week in Review
1 October 2016
Center for Vaccine Ethics & Policy (CVEP)

This weekly digest targets news, events, announcements, articles and research in the vaccine and global health ethics and policy space and is aggregated from key governmental, NGO, international organization and industry sources, key peer-reviewed journals, and other media channels. This summary proceeds from the broad base of themes and issues monitored by the Center for Vaccine Ethics & Policy in its work: it is not intended to be exhaustive in its coverage.

*Vaccines and Global Health: The Week in Review is also **posted in pdf form** and as a set of blog posts at http://centerforvaccineethicsandpolicy.wordpress.com/. This blog allows full-text searching of over 8,000 entries.*

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***Request an email version:** Vaccines and Global Health: The Week in Review is published as a single email summary, scheduled for release each Saturday evening before midnight (EST/U.S.). If you would like to receive the email version, please send your request to david.r.curry@centerforvaccineethicsandpolicy.org.*

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Milestones/Emergencies

Region of the Americas is declared free of measles

Washington, D.C., 27 September 2016 (PAHO/WHO) – The Region of the Americas is the first in the world to have eliminated measles, a viral disease that can cause severe health problems, including pneumonia, brain swelling and even death. This achievement culminates a 22-year effort involving mass vaccination against measles, mumps and rubella throughout the Americas.

The declaration of measles' elimination was made by the International Expert Committee for Documenting and Verifying Measles, Rubella, and Congenital Rubella Syndrome Elimination in the Americas. The announcement came during the 55th Directing Council of the Pan American Health Organization/World Health Organization (PAHO/WHO), which is currently underway and is being attended by ministers of Health from throughout the Americas.

Measles is the fifth vaccine-preventable disease to be eliminated from the Americas, after the regional eradication of smallpox in 1971, poliomyelitis in 1994, and rubella and congenital rubella syndrome in 2015.

"This is a historic day for our region and indeed the world," said PAHO/WHO Director Carissa F. Etienne. "It is proof of the remarkable success that can be achieved when countries work together in solidarity towards a common goal. It is the result of a commitment made more than two decades ago, in 1994, when the countries of the Americas pledged to end measles circulation by the turn of the 21st century."

Before mass vaccination was initiated in 1980, measles caused nearly 2.6 million annual deaths worldwide. In the Americas, 101,800 deaths were attributable to measles between 1971 and 1979. A cost-effectiveness study on measles elimination in Latin America and the Caribbean has estimated that with vaccination, 3.2 million measles cases will have been prevented in the Region and 16,000 deaths between 2000 and 2020.

"This historic milestone would never have been possible without the strong political commitment of our Member States in ensuring that all children have access to life-saving vaccines," Etienne continued. "It would not have been possible without the generosity and commitment of health workers and volunteers who have worked so hard to take the benefits of vaccines to all people, including those in vulnerable and hard-to-reach communities. Indeed it would not have been possible without the strong leadership and coordination provided by PAHO, Regional Office for the Americas of WHO."

Measles transmission had been considered interrupted in the Region since 2002, when the last endemic case was reported in the Americas. However, as the disease had continued to circulate in other parts the world, some countries in the Americas experienced imported cases. The International Expert Committee reviewed evidence on measles elimination presented by all the countries of the Region between 2015 and August 2016 and decided that it met the established criteria for elimination. The process included six years of work with countries to document evidence of the elimination…

As a result of global measles elimination efforts, only 244,704 measles cases were reported worldwide in 2015, representing a significant decline from earlier years. However, more than a half of these reported cases were notified in Africa and Asia.

To maintain measles elimination, PAHO/WHO and the International Expert Committee have recommended that all countries of the Americas strengthen active surveillance and maintain their populations' immunity through vaccination.

"I would like to emphasize that our work on this front is not yet done," warned Etienne. "We cannot become complacent with this achievement but must rather protect it carefully. Measles still circulates widely in other parts of the world, and so we must be prepared to respond to imported cases. It is critical that we continue to maintain high vaccination coverage rates, and it is crucial that any suspected measles cases be immediately reported to the authorities for rapid follow-up."…

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WHO calls for immediate safe evacuation of the sick and wounded from conflict areas

WHO is also calling for a halt of attacks on health care workers and facilities.

News release

30 September 2016 | GENEVA - WHO is calling on belligerents in Syria to allow for the immediate and safe evacuation of the sick and wounded from all areas affected by the conflict, including eastern Aleppo. The Organization is also calling for a halt of attacks on health care workers and facilities.

"The situation is heart-rending and enraging," says WHO Director-General Margaret Chan. "With the relentless attacks on health workers and hospitals, the handful of doctors still alive cannot possibly cope. Hospital beds are too few, equipment has been destroyed, and essential medicines, including anaesthetics, are running out. Many patients needing emergency trauma care are children."

Dwindling supplies of food and water

More than 270 000 people are trapped in east Aleppo with dwindling supplies of food, water and fuel. Humanitarian organizations have not been allowed to deliver aid, including medical supplies from WHO since the besiegement of the city on 7 July. Within the past week, over 840 people have been injured, almost a third of them children, while the health facilities that would treat them are crumbling and understaffed. Fewer than 30 doctors remain in the east of the city, and only 6 partially-functional hospitals are in service.

WHO is calling on all parties in the conflict to:

:: allow the immediate evacuation of the sick and wounded from all areas affected by the conflict, including eastern Aleppo;

:: allow access to provide medicines, medical supplies, fuel and health personnel, to support overwhelmed staff in Aleppo;

:: immediately halt all attacks on health workers, facilities and supplies;

:: respect the safety and neutrality of health workers and health facilities;

:: cease removal of critical supplies from deliveries of medical supplies.

"Attacking health care is both illegal and barbaric," says Dr Pete Salama, Executive Director of WHO's health emergencies programme. "Blocking whole populations from access to medical care, food and water is intolerable. It is inexcusable cruelty."

WHO and partners have positioned medical supplies for delivery into eastern Aleppo, but they have not been granted access. The organization has also developed strategies for medical evacuations as soon as this becomes possible. In the meantime, WHO will train first responders on trauma care via telephone and video calls.

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WHO: Recognizing health as a human right for refugees and migrants

25 September 2016 – War, conflict and persecution have forced millions of people to flee their homes and seek refuge and safety elsewhere. As of 2015, there were 250 million international migrants, of which 150 million are migrant workers. Also affected are particularly vulnerable groups of refugees (21.3 million) and internally displaced persons (40.8 million). Of these, 9.1 million refugees and 21 internally displaced persons (IDPs) originate from the Eastern Mediterranean Region, which carries the largest burden of refugees and IDPs globally.

Properly addressing the health needs of migrants and refugees improves their health, protects global public health, facilitates integration and contributes to social and economic development in the host country. Yet, while the health of migrants is a prequisite for their positive contribution to inclusive growth and sustainable development, health has not been extensively included in debates outside the health sector or within the 2030 Sustainable Development Agenda, in particular goals 3.8 and 10.7 to ensure healthy lives for all and to leave no-one behind. Adopting a human rights-based approach means that the rights of refugees, asylum seekers and migrants and the right to health are integral to all priorities and actions.

On 19 September, the United Nations hosted the first high-level UN summit on "Addressing large movement of refugees and migrants" in which Member States endorsed the New York Declaration for Refugees and Migrants, expressing the commitment and political will of world leaders to protect the rights of refugees and migrants, to save lives and share responsibility for large movements on a global scale. On the sidelines of the summit, representatives from the World Health Organization (WHO), the Office of the United Nations High Commissioner for Refugees (UNHCR), and the International Organization for Migration (IOM) convened in New York to increase collaboration in addressing the urgent issue of health in the context of migration and forced displacement.

These events follow extensive efforts by WHO to address the health of migrants and refugees. WHO organized a technical briefing on migration and health during the 69th World Health Assembly in May 2016. The recommendations and priority actions discussed during the briefing, together with operational framework developed from the Madrid Global Consultation, have been used to guide WHO work on migration and health in all WHO regions.

At a High-level Meeting on Refugee and Migrant Health, held in Rome, Italy, in November 2015, Member States of the WHO European Region agreed on the need for a common framework for

collaborative action on refugee and migrant health, acting in a spirit of solidarity and mutual assistance, to promote a common response, thereby avoiding uncoordinated single-country solutions. This framework led to the development of a Strategy and Action Plan on Refugee and Migrant Health in the WHO European Region, along with a Resolution, calling for urgent action and a concerted and coordinated response based on solidarity among Member States.

The strategy and action plan are designed to respond to the health needs associated with the migration process. These include the need to ensure the availability, accessibility, acceptability, affordability and quality of essential services in transit and host environments, including health and social services, together with basic services such as water and sanitation. It also addresses vulnerability to health risks, exposure to potential hazards and stress, and increased susceptibility to poverty and social exclusion, abuse and violence, and stigmatization and discrimination. The priority areas within the strategy and action plan will be implemented taking account of the specific country contexts and in accordance with national legislation, priorities and circumstances.

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Zika virus [to 1 October 2016]
Public Health Emergency of International Concern (PHEIC)
http://www.who.int/emergencies/zika-virus/en/

Zika situation report – 29 September 2016
Full report: http://apps.who.int/iris/bitstream/10665/250244/1/zikasitrep29Sep16-eng.pdf?ua=1

Key Updates
:: Countries and territories reporting mosquito-borne Zika virus infections for the first time in the past week:
… None

:: Countries in the Western Pacific Region continue to report new cases as seen in Singapore, Philippines, Malaysia and Viet Nam.
… Thailand, in the South-East Asia Region, has also recently reported Zika cases. Key areas of the response as identified by members of the Association of Southeast Asian Nations (ASEAN) are disease surveillance and risk assessment, relevant and timely sharing of data, regional surveillance and response, vector control, diagnostic testing, laboratory networks and risk communication, and sharing knowledge and best practices. The Ministry of Public Health of Thailand is investigating cases of microcephaly to determine if they may be linked to Zika infection.

:: Countries and territories reporting microcephaly and other central nervous system (CNS) malformations potentially associated with Zika virus infection for the first time in the past week:
… None

:: Countries and territories reporting Guillain-Barré syndrome (GBS) cases associated with Zika virus infection for the first time in the past week:
… None

Analysis
:: Overall, the global risk assessment has not changed.

:: The investigation of microcephaly cases in Thailand is important to determine whether these cases are linked to Zika infection – if found to be linked, these would be the first identified cases of Zika-associated microcephaly in Southeast Asia. If Zika is identified, viral sequencing would be necessary to determine the strain of the virus to determine whether it is a local or imported strain.

:: The sequencing results from 5 Zika virus cases reported in Malaysia indicate that all are from the "Asian" lineage. Two of the cases, including the imported case, are similar to the virus that was circulating in French Polynesia in 2013, i.e., a post-2007 "Asian" strain. The other 3 locally acquired cases are reported to be a similar to a previously circulating Southeast Asian strain of the "Asian" lineage

WHO calls for stronger measures against Zika as Thailand confirms disease-related microcephaly
SEAR/PR/1641
New Delhi, 30 Sep 2016 – The World Health Organization today urged countries across the WHO South-East Asia Region to continue to take decisive action to prevent, detect and respond to Zika virus as Thailand confirmed two cases of Zika-related microcephaly.
"Zika virus infection is a serious threat to the health and wellbeing of a pregnant woman and her unborn child. Countries across the Region must continue to strengthen measures aimed at preventing, detecting and responding to Zika virus transmission," Dr Poonam Khetrapal Singh, Regional Director, WHO South-East Asia, said.
Thailand has confirmed two cases of Zika-related microcephaly, which, along with other neurological disorders, can occur when a neonate has been exposed to Zika virus in utero.
"Thai authorities have been active in detecting and responding to Zika virus," Dr Khetrapal Singh said. "Thailand's diligence underscores the commitment of health authorities to the health and wellbeing of the Thai public, and provides a positive example to be emulated."…

Zika Open [to 1 October 2016]
[Bulletin of the World Health Organization]
:: All papers available here
No new papers identified.

Editor's Note:
Please see CDC announcements on Zika below

New England Journal of Medicine
September 29, 2016 Vol. 375 No. 13
http://www.nejm.org/toc/nejm/medical-journal
Perspective
Considerations for Developing a Zika Virus Vaccine [Free full text]
H.D. Marston, N. Lurie, L.L. Borio, and A.S. Fauci

Fast-Track Zika Vaccine Development — Is It Possible? [Free full text]
S.J. Thomas, M. L'Azou, A.D.T. Barrett, and N.A.C. Jackson

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EBOLA/EVD [to 1 October 2016]
http://www.who.int/ebola/en/
"Threat to international peace and security" (UN Security Council)

[Editor's Note:
We note that the Ebola tab - which had been listed along with Zika, Yellow Fever, MERS CoV and other emergencies - has been removed from the WHO "home page". We deduce that WHO has suspended issuance of new Situation Reports after resuming them for several weekly cycles. The most recent report posted is EBOLA VIRUS DISEASE – Situation Report - 10 JUNE 2016. We have not encountered any UN Security Council action changing its 2014 designation of Ebola as a "threat to international peace and security." We will continue to highlight key articles and other developments around Ebola in this space.

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POLIO [to 1 October 2016]
Public Health Emergency of International Concern (PHEIC)

Polio this week as of 28 September 2016
:: Nigeria has been reclassified as a country affected by endemic transmission of wild poliovirus type 1 (WPV1). Nigeria had been removed from the list of endemic countries in September 2015, following a year of no reported/detected WPV1 cases in the country. However, the recent cases of WPV1 detected from Borno are closely linked to cases from Borno in 2011, indicating this strain has been circulating undetected since that time. This indicates that Nigeria has always been affected by endemic circulation of WPV1 and, hence, it is added again to the list of endemic countries, alongside Pakistan and Afghanistan. Operationally, neither the removal from the list nor its re-addition has an impact, as the country has always striven to improve operations (both surveillance and immunizations), particularly in hard-to-reach and security-compromised areas. It is, in part, as a result of these efforts that cases and viruses are now being detected.

:: Selected Country Updates [excerpts]
Afghanistan
: One new WPV1 environmental positive sample was reported in the past week, from Quetta, Balochistan (collected on 15 August). Continued detection of environmental positive samples throughout 2016 confirms that virus transmission continues to be geographically widespread across the country, despite strong improvements being achieved.

Nigeria

:: A circulating vaccine-derived poliovirus type 2 (cVDPV2) has been detected from Monguno Local Government Area, Borno state. The virus was isolated from stool specimens (collected on 26 August) taken from a healthy household contact of the wild poliovirus type 1 (WPV1) case recently reported, as part of strengthened disease surveillance activities being implemented in the area. Genetic sequencing of this isolated strain indicates it is distantly linked genetically to a divergent cVDPV2 strain detected from Borno in March, which has been circulating in the area for at least two years without prior detection.
:: A regional outbreak response in north-eastern Nigeria continues to be implemented, also in response to the WPV1 cases detected in August in Borno state (including one case from Monguno LGA). Large-scale supplementary immunization activities (SIAs) are currently being implemented with bivalent oral polio vaccine (OPV) and inactivated polio vaccine (IPV). The impact of the outbreak response is being analysed to determine if additional interventions with mOPV2 will be necessary. Nigeria had already conducted an outbreak response using mOPV2 in response to the cVDPV2 detected from environmental sampling in March.
:: In response to detection of polio in Borno, the government of Nigeria has declared the outbreak to be a national public health emergency; the governments of Cameroon, Central African Republic, Chad and Niger declared a regional public health emergency for the Lake Chad sub-region. Regional outbreak response is being coordinated across all countries, and within the context of the broader humanitarian emergency affecting parts of the region. Polio eradication teams on the ground, at national, regional and global levels, are closely coordinating with humanitarian emergency response teams, other UN organizations and NGOs, to maximise the impact of all available resources and ensure that polio vaccine can be delivered alongside broader health interventions to the most vulnerable and at-need populations in the region.
:: A regional outbreak response in north-eastern Nigeria continues to be implemented. Large-scale supplementary immunization activities (SIAs) are currently being implemented with bivalent oral polio vaccine (OPV) and inactivated polio vaccine (IPV).
:: The emergency regional outbreak response is being implemented under the guidance of the Polio Eradication Emergency Operations Center (EOC), led by the Government of Nigeria and with support from WHO and GPEI partners. The outbreak response is being coordinated with neighbouring countries and in the broader humanitarian emergency response context affecting the region. Similar approaches to outbreak response were successfully implemented in previous years in the Middle East and the Horn of Africa.

Lake Chad sub-region

:: The recent detection of wild poliovirus type 1 (WPV1) in Borno state, Nigeria, poses a risk to the neighbouring countries of the Lake Chad sub-region and hence an outbreak response plan is being implemented as part of the response to the Nigeria outbreak.
:: Health leaders at last month's Regional Committee for Africa declared the situation to be a regional public health emergency for the Lake Chad sub-region.
:: A regional outbreak response is currently ongoing, to reach more than 10 million children across Central African Republic, Chad, Niger, Nigeria and Cameroon. The activity is being coordinated and planned across all countries, with particular focus on sharing of data and on population movements. Some areas are currently inaccessible due to a combination of insecurity and flooding in the rainy season.

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Yellow Fever [to 1 October 2016]
http://www.who.int/emergencies/yellow-fever/en/

Yellow fever situation report
30 September 2016
Read the full situation report

Key updates
Angola epidemiological update (as of 22 September):
:: The last confirmed case had symptom onset on 23 June.
:: Three of the four laboratory positive cases reported in the previous situation report have

Democratic Republic of the Congo epidemiological update (as of 18 September):
:: The last confirmed non-sylvatic case had symptom onset on 12 July.
:: Five of the eight cases in Kinshasa province that were under investigation had a history of yellow fever vaccination have been ruled out as new yellow fever cases. Seven cases remain under investigation
: The reactive vaccination campaign in Feshi and Mushenge Health Zones in Kwango province will begin next week.
: Democratic Republic of the Congo is planning a pre-emptive vaccination campaign.

Analysis
The continuing detection and investigation of suspected and laboratory positive cases demonstrate that active surveillance is functioning well in some areas. Nevertheless, it is important to note the inherent difficulties in surveillance and laboratory confirmation capacities. It remains possible that detection of a case could be delayed in some remote areas. A strong and sustained surveillance effort is therefore more crucial than ever.

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MERS-CoV [to 1 October 2016]
http://www.who.int/emergencies/mers-cov/en/

No new content identified.

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WHO & Regional Offices [to 1 October 2016]

Disease outbreak news (DONs)
: Rift Valley fever in Niger 29 September 2016
On 30 August 2016, WHO received reports about unexplained deaths among humans, along with death and abortion in livestock in the North Western parts of Niger, and the areas bordering Mali.

From 2 August to 22 September 2016, 64 human cases including 23 deaths have been reported in Tchintabaraden health district in Tahoua region. The area is mainly populated by nomadic stockbreeders…

Discrimination against older people is bad for health

29 September 2016 – New analysis shows that negative attitudes towards older people are widespread, and that these attitudes affect the physical and mental health of older people. More than 83 000 people in 57 countries took part in a WHO survey, in which 60 % of respondents reported that older people are not respected. The lowest levels of respect were reported in high income countries.

World Rabies Day

Educate. Vaccinate. Eliminate.
Date: 28 September 2016

World Rabies Day is celebrated annually to raise awareness about rabies prevention and to highlight progress in defeating this horrifying disease. 28 September also marks the anniversary of Louis Pasteur's death, the French chemist and microbiologist, who developed the first rabies vaccine.

Today, safe and efficacious animal and human vaccines are among the important tools that exist to eliminate human deaths from rabies while awareness is the key driver for success of communities to engage in effective rabies prevention.

The theme for 2016 is Rabies: Educate. Vaccinate. Eliminate. which emphasises the two crucial actions that communities can do to prevent rabies. It also reflects the global target to eliminate all human deaths from dog-mediated rabies by 2030.

Highlights

Neglected tropical diseases: 979 million people treated in 2015 alone

September 2016 – WHO has released data for 2015 showing that a record 979 million people benefited from large-scale treatment of at least 1 neglected tropical disease in 2015 alone. This unprecedented achievement may be the first time that so many people have been treated globally as part of a public health intervention in one single year.

New financial arrangement improves WHO prequalification of medical products

September 2016 – WHO, industry groups and key partners have agreed on a new financing arrangement to ensure the financial sustainability and quality of WHO's prequalification programme. The arrangement is based on an improved fee structure and aims to address global quality challenges in medical products.

Region of the Americas is declared free of measles

September 2016 --The Region of the Americas is the first in the world to have eliminated measles, a viral disease that can cause severe health problems, including pneumonia, blindness, brain swelling and even death. This achievement culminates a 22-year effort involving mass vaccination against measles, mumps and rubella throughout the Americas.
[See more details in Milestones above]

Collaboration against visceral leishmaniasis

September 2016 – Besides donated medicines, financial assistance will expand leishmaniasis

surveillance and control. A new five-year collaboration includes funding that will allow populations affected by visceral leishmaniasis to benefit from enhanced access to diagnosis and treatment

Weekly Epidemiological Record, 30 September 2016, vol. 91, 39 (pp. 441–460)
Global programme to eliminate lymphatic filariasis: progress report, 2015
Summary of global update on preventive chemotherapy implementation in 2015

Call for propsals: Joomla website administrator/developer for the TechNet website and e-forum
pdf, 311kb
26 September 2016
Deadline for application: 28 October 2016

:: WHO Regional Offices
Selected Press Releases, Announcements
WHO African Region AFRO
:: Immunization officers urged to strengthen efforts to reach every child with vaccines and other health services
Harare, 26 September 2016 – The World Health Organization has called for renewed efforts to reach every child in the African Region with vaccines and other health services. The call came at a meeting held in Harare, Zimbabwe for immunization officers from the East and Southern African sub-Region (ESA). Speaking at the event, Dr Felicitas Zawaira, Director of Family and Reproductive Health of the WHO Regional Office for Africa, said: "Immunization is one of the key interventions that contribute to averting a large proportion of preventable deaths and we need to prioritize the attainment of universal immunization coverage by 2020…

WHO Region of the Americas PAHO
:: Nearly all health targets of the Millennium Development Goals were achieved in the Americas (09/30/2016)
:: Health ministers adopt new plan for malaria elimination in the Americas (09/29/2016)
:: Countries of the Americas agree on plan to end AIDS and STIs as public health problems by 2030 (09/28/2016)
:: Region of the Americas is declared free of measles (09/27/2016)
:: PAHO recognizes Uruguay for defending tobacco control policies against commercial interests (09/26/2016)

WHO South-East Asia Region SEARO
:: WHO calls for stronger measures against Zika as Thailand confirms disease-related microcephaly
30 September 2016
:: Address air pollution and its growing disease burden as a priority: WHO
27 September 2016

WHO European Region EURO

:: WHO/Europe and Ministry of Health of Greece expand collaboration on health reform priorities 30-09-2016
:: New collaborating centre on cultural contexts of health at the University of Exeter 30-09-2016
:: Public health successes and missed opportunities - new report on alcohol-attributable deaths 28-09-2016
:: Release of WHO data on air pollution exposure and its health impact by country 27-09-2016

WHO Eastern Mediterranean Region EMRO
:: New financial arrangement improves WHO prequalification of medical products
30 September 2016
:: WHO releases country estimates on air pollution exposure and its health impact
27 September 2016
:: Recognizing health as a human right for refugees and migrants
25 September 2016

WHO Western Pacific Region
No new, unique announcements identified.

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CDC/ACIP [to 1 October 2016]
http://www.cdc.gov/media/index.html
https://www.cdc.gov/vaccines/acip/
30 Sep 2016
CDC updates interim guidance for pre-pregnancy counseling and prevention of sexual transmission of Zika - Media Statement

29 Sep 2016
CDC issues Zika special travel considerations for 11 Southeast Asian countries - Media Statement

29 Sep 2016
Influenza Outlook 2016-2017: What You Should Know about Flu Prevention This Season - Media Advisory

MMWR Weekly September 30, 2016 / No. 38
:: Influenza Vaccination Coverage Among Health Care Personnel — United States, 2015–16 Influenza Season
:: Local Mosquito-Borne Transmission of Zika Virus — Miami-Dade and Broward Counties, Florida, June–August 2016
:: Notes from the Field: Measles Outbreak of Unknown Source — Shelby County, Tennessee, April–May 2016
:: Announcement: Final 2015–16 Influenza Vaccination Coverage Estimates for Selected Local Areas, States, and the United States Available Online

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Announcements/Perspectives

UNICEF [to 17 September 2016]
http://www.unicef.org/media/media_89711.html

SANAA, 28 September 2016
Mobile health teams help save children's lives in Yemen – UNICEF

UNICEF and its partners have completed an ambitious drive to reach children and women in Yemen with critical health and nutrition services to save lives as the conflict continues.

The 24-29 September nation-wide campaign reached more than 600,000 children under the age of five and over 180,000 pregnant and breastfeeding mothers with a package of health and nutrition services that include **vaccination**, vitamin supplementation, deworming, screening for malnutrition and treatment for childhood infections as well as antenatal and postnatal care for women.

Over 34,000 health workers supported by 880 supervisors and monitors spread across Yemen's 333 districts using over 10,000 vehicles and other means of transportation such as motorcycles, donkeys or simply walking long distances on difficult terrains to reach children and women in far flung corners of the country.

"We have increased our geographical reach to all parts of the country as well as increased the number of times we do the integrated outreach. This has resulted in delivering medical assistance to the most hard-to-reach communities especially those most affected by the conflict", said UNICEF Yemen Representative Julien Harneis.

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Gavi [to 1 October 2016]
http://www.gavi.org/library/news/press-releases/
New York, 22 September 2016
HealthRight International honours Seth Berkley for leadership in global health

HealthRight International, an organisation dedicated to delivering health care to marginalised communities around the world, has honoured Gavi CEO, Dr. Seth Berkley, for his career as a leader in global health.

The group's annual Health & Human Rights Awards Dinner brought together human rights and public health professionals, leaders from civil society, media, politics and the business community.

In addition to honouring Dr. Berkley, HealthRight International also recognised the accomplishments of Dr. Eva Metalios. The Medical Director of the Bronx Human Rights Clinic & the Montefiore Medical Centre Residency Program in Primary Care and Social Internal Medicine, Dr. Metalios treats torture survivors and trains other doctors to perform forensic exams on those who have faced violent persecution.

Dr. Lyndon Haviland, a global public health expert and advocate who has worked for many years with Dr. Berkley, presented the award by citing how he has combined expertise and passion in his work. He "will jump into the deep end of any pool to make it possible for all of us to deliver on the value proposition: that every child, everywhere, every person in every country deserves a life of dignity and health," she said…

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AERAS [to 1 October 2016]
http://www.aeras.org/pressreleases
September 28, 2016 Rockville, MD
Aeras Launches AerasSHARE Biorepository to Help Advance TB Vaccine Research
Researchers Can Access Specimens and Datasets
Aeras, a nonprofit research and development organization dedicated to the development of new TB vaccines, has launched the AerasSHARE Biorepository, a new website to allow researchers from other organizations to access specimens and datasets that were collected by Aeras and its research partners in an effort to facilitate state-of-the-art TB vaccine related science and promote world-wide collaboration among TB vaccine researchers.

The AerasShare Biorepository includes specimens of blood drawn from volunteers in a number of clinical trials, as allowed by the participant agreements. The samples, which are stored at Aeras's headquarters in Rockville, Maryland, and at sites in Africa near where the trials were conducted, will be sent to researchers whose requests have been approved by the Biorepository Oversight Committee (BOC).

"As a nonprofit, mission-driven organization, Aeras is dedicated to promoting collaboration with researchers around the world to speed the development of new, improved TB vaccines," said Aeras CEO Jacqueline E. Shea, PhD. "TB causes more deaths globally than any other single pathogen and the world urgently needs a new vaccine."

TB is a global epidemic which kills more people than any other single infectious agent, with 1.5 million deaths and 9.6 million new cases in 2014. Experts agree that new vaccines are critical to ending the epidemic in the next 15 – 20 years as targeted by the United Nation's Sustainable Development Goals and the World Health Organization.

Researchers who wish to access specimens or datasets can submit a request on the AerasSHARE Biorepository website at bioshare.aeras.org. The site is governed by a charter that provides general principles for the management and good governance of the repository to ensure that the interests of donors and all other stakeholders are safeguarded. Each participating study will have a BOC or a previously established governing body to ensure compliance with biorepository management best practices and provide peer-review of submitted proposals for specimens and datasets. Researchers can track the process on the website. Specimens and datasets are provided at no cost to researchers, but requestors are responsible for the actual shipping and handling costs and any costs related to special processing required. The program does not provide research funding.

Aeras is grateful to the National Heart, Lung, and Blood Institute for sharing its BioLINCC Program, after which the AerasSHARE Biorepository was modelled.

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European Medicines Agency [to 1 October 2016]
http://www.ema.europa.eu/

30/09/2016
Meeting highlights from the Pharmacovigilance Risk Assessment Committee (PRAC) 26-29 September 2016

29/09/2016
New judicial decisions at odds with EMA's efforts to allow access to documents on medicines
EMA appeals interim measures
The European Medicines Agency (EMA) has appealed two interim orders by the President of the General Court of the European Union (EU) to suspend the release of documents requested by third parties under Regulation (EC) no. 1049/2001, the so-called "Transparency Regulation".
The first order blocked the release of a clinical study report for Translarna, a centrally authorised medicine for the treatment of Duchenne's muscular dystrophy, until a final ruling is given by the General Court. EMA was planning to provide access to the clinical study report in response to an access to documents request, with appropriate redactions in accordance with the Regulation.
The second order, issued at the same time, blocked the release of three toxicity studies for Bravecto, a veterinary medicine used to treat flea and tick infestations in dogs and cats.
The interim rulings were made as part of court cases brought by PTC Therapeutics and Intervet respectively, to stop EMA's release of the documents in question…

26/09/2016
EU-US collaboration to boost medicine development for rare diseases
New working group will share information and best practices
The European Medicines Agency (EMA) and the United States Food and Drug Administration (FDA) have set up a new 'cluster' on rare diseases to share experiences and best practices on each other's regulatory approach to the development of medicines for these diseases.
While rare diseases are estimated to affect 30 million people in the European Union and approximately the same number in the United States, each disease individually concerns a limited number of patients. Therefore, global collaboration in this area is particularly important to ensure that the limited number of studies that can be conducted, due to the small populations, can benefit all patients regardless of where they live.
The agencies will exchange information on various aspects of the development and scientific evaluation of medicines for rare diseases. These include topics such as:
:: the design of clinical trials in small populations and the use of statistical analysis methods;
:: the selection and validation of trial endpoints, i.e. target outcomes of a trial;
:: preclinical evidence to support development programmes;
: the design of post-marketing studies, in particular in the context of early access mechanisms such as EMA's conditional marketing authorisation and FDA's accelerated approval;
:: risk management strategies for long-term safety issues with medicines for rare diseases.
The cluster will provide a forum for confidential exchange of draft documents, policies under development, and more detailed information supporting the scientific basis for decision making on medicine development…

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FDA [to 1 October 2016]
http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/default.htm

What's New for Biologics
:: Influenza Virus Vaccine for the 2016-2017 Season
Updated: 9/28/2016

NIH [to 1 October 2016]
http://www.nih.gov/news-events/news-releases
September 26, 2016
NIH funds research network focused on HIV-infected youth
— Studies also will address HIV prevention among at-risk groups.
The National Institutes of Health has awarded funding for a research network devoted to the health and well-being of adolescents and young adults with HIV or at risk for HIV infection. The awards, up to $24 million in 2016, provide for three research centers and a data coordinating center that will make up the Adolescent Medicine Trials Network for HIV/AIDS Interventions (ATN).
"Most new HIV infections occur in young people," said Bill G. Kapogiannis, M.D., network co-director and medical officer at the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), the NIH institute providing much of the funding for the awards. "Many in this population go a long time before they find out they have HIV and often do not get the care they need."…

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Coalition for Epidemic Preparedness Innovations (CEPI) [to 1 October 2016]
http://cepi.net/
CEPI Newsletter 23. September 3/2016
MoU between CEPI and WHO
A Memorandum of Understanding (MoU) between CEPI and the World Health Organization was signed in Geneva, 15 September. The agreement aligns with the WHO R&D Blueprint Plan of Action and defines key areas of collaboration between CEPI and WHO. Signing the document are Marie-Paule Kieny, Assistant Director General of WHO and John-Arne Røttingen, Interim CEO of CEPI.
CEPI interim Board
The first meeting of the interim board of CEPI was held in London, 31 August. The board documents and the summary of the board's deliberations are now available on the CEPI website: http://cepi.net/governance#Interim-Board-Meetings
2-pager on CEPI
A short document on CEPI, presenting the background for the organization as well as its vision and approach has been developed. It also includes the list of CEPI interim Board members. The 2-pager is available on the CEPI website and is a useful handout when communicating about CEPI: http://cepi.net/mission

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Industry Watch [to 1 October 2016]
:: **BARDA Grants $43.2 million USD to Sanofi Pasteur for Zika**
– Funds will be used for phase II development and manufacturing –
Paris, France – September 26, 2016 – Sanofi and its vaccines global business unit Sanofi Pasteur announced today that the Biomedical Advanced Research and Development Authority

(BARDA) within the Office of the Assistant Secretary for Preparedness and Response in the U.S. Department of Health and Human Services has agreed to a proposal to fund the manufacture of an inactivated Zika vaccine for phase II development. Sanofi Pasteur committed to researching and developing a vaccine to prevent Zika in February, shortly after the World Health Organization declared an emergency.

In July 2016, Sanofi Pasteur announced a Cooperative Research and Development Agreement with the Walter Reed Army Institute of Research (WRAIR) on the co-development of a Zika vaccine candidate. The BARDA funding is to take WRAIR's Zika purified inactivated virus (ZPIV) vaccine into phase II development with manufacturing and characterization of the vaccine product as well as optimization of the upstream process to improve production yields.

Sanofi Pasteur is in the process of creating a clinical development and regulatory strategy while WRAIR and the National Institute of Allergy and Infectious Diseases (NIAID)–part of the U.S. National Institutes of Health (NIH)—are conducting a series of phase I ZPIV trials. Beyond the funding provided by BARDA for the two phase I/II clinical trials, there is an option in the contract that BARDA can exercise for continuing support through Phase III industrial and clinical development.

"Given the devastating effects that this infectious disease can have on babies of infected mothers and the fact that the disease appears to rapidly spread, Sanofi Pasteur decided to get involved early on" said David Loew, Sanofi Executive Vice President and Head of Sanofi Pasteur. "We are very pleased that the U.S. government is committed to working with us to develop a Zika vaccine. Based on this collaboration, we can bring together resources and expertise which are essential in fighting this public-health concern."…

:: **MSD Animal Health Demonstrates Commitment to Eliminate Rabies Worldwide with Donation of More Than Two Million Doses of Vaccine to Date**

September 28, 2016 08:00 AM Eastern Daylight Time

MADISON, N.J.--(BUSINESS WIRE)--MSD Animal Health (known as Merck Animal Health in the United States and Canada) is proud to announce a landmark accomplishment in its fight against rabies with the donation of now more than two million doses of its NOBIVAC® rabies vaccine to organizations working to eliminate this completely preventable disease. This year's donations of vaccines and other resources to the Afya Serengeti Project and Mission Rabies in the world's most at-risk regions further represent the Company's deep, long-standing commitment to the fight against rabies.

"We, and the communities supported by this project, are very grateful for the continued support of MSD Animal Health that allows us to control rabies and save lives in vulnerable regions."

Each year, an estimated 59,000 people die from rabies, with 40 percent of those deaths occurring in children under the age of 15.1 Rabies, a neglected disease of vulnerable populations, occurs mainly in remote rural communities where children ages 5 to 14 are frequent victims. Africa and India bear the highest burden of total annual rabies deaths.2 Since dogs are the source of the vast majority of human cases and the primary reservoirs, the widespread vaccination of dogs is an effective method for eliminating the disease.2

"On this World Rabies Day and every day, MSD Animal Health is proud to extend our collaboration with the Afya Serengeti Project, which we've been committed to for more than 15 years, and with Mission Rabies, in our continued fight against rabies," said Ingrid Deuzeman, Global Marketing Director, MSD Animal Health. "A preventable disease with a devastating

impact in vulnerable populations, we are committed to these partnerships and efforts to eliminate rabies globally."

Join the Fight Against Rabies
In more than 20 participating countries, when pet owners and veterinarians choose NOBIVAC® vaccines, MSD Animal Health has committed to match it with a donation of NOBIVAC® rabies vaccines to the Afya Serengeti Project and Mission Rabies.

"Every year, more than 25 million people worldwide receive a post-bite vaccination, which prevent hundreds of thousands of rabies deaths annually. However, in areas without sufficient access to treatment and hospitals, the impact of rabies is catastrophic. Every day, people are being exposed to rabies and they then face a race against time, which can sometimes have a deadly and tragic outcome," said Professor Sarah Cleaveland, Founder, Afya Serengeti Project. "We, and the communities supported by this project, are very grateful for the continued support of MSD Animal Health that allows us to control rabies and save lives in vulnerable regions."

"Widespread canine vaccinations are preventing the needless devastation that rabies can cause in people and animals," said Luke Gamble, Founder, Mission Rabies. "Our collaboration with MSD Animal Health is an invaluable resource in our mission to eliminate rabies worldwide by 2030."
For more information, visit www.afya.org, www.missionrabies.com and rabiesalliance.org/world-rabies-day. More information about NOBIVAC® vaccines can be found at www.nobivac.com.

:: **Walgreens and United Nations Foundation Launch 2016 Get a Shot. Give a Shot.® Campaign**
Walgreens customers can help protect millions of children in developing countries from polio and measles, as campaign enters fourth year
September 28, 2016
DEERFIELD, Ill.--(BUSINESS WIRE)--Walgreens and the United Nations (UN) Foundation today announced the launch of the 2016 Get a Shot. Give a Shot. campaign, a fourth-year collaboration to help provide life-saving vaccines to children in developing countries. Now through Aug. 31, 20171, for every flu shot or other immunization administered at Walgreens pharmacies, Healthcare Clinics, or Duane Reade pharmacies, Walgreens will donate the value of a life-saving vaccine through the Foundation's Shot@Life campaign…

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BMGF - Gates Foundation [to 1 October 2016]
http://www.gatesfoundation.org/Media-Center/Press-Releases

EDCTP [to 1 October 2016]
http://www.edctp.org/
The European & Developing Countries Clinical Trials Partnership (EDCTP) aims to accelerate the development of new or improved drugs, vaccines, microbicides and diagnostics against HIV/AIDS, tuberculosis and malaria as well as other poverty-related and neglected infectious diseases in sub-Saharan Africa, with a focus on phase II and III clinical trials.
No new digest content identified.

European Vaccine Initiative [to 1 October 2016]
http://www.euvaccine.eu/news-events
No new digest content identified.

Fondation Merieux [to 1 October 2016]
Mission: Contribute to global health by strengthening local capacities of developing countries to reduce the impact of infectious diseases on vulnerable populations.
http://www.fondation-merieux.org/news
No new digest content identified.

GHIT Fund [to 1 October 2016]
https://www.ghitfund.org/
GHIT was set up in 2012 with the aim of developing new tools to tackle infectious diseases that devastate the world's poorest people. Other funders include six Japanese pharmaceutical companies, the Japanese Government and the Bill & Melinda Gates Foundation.
No new digest content identified

Global Fund [to 1 October 2016]
http://www.theglobalfund.org/en/news/?topic=&type=NEWS;&country=
No new digest content identified.

Hilleman Laboratories [to 1 October 2016]
http://www.hillemanlabs.org/
No new digest content identified

Human Vaccines Project [to 1 October 2016]
http://www.humanvaccinesproject.org/media/press-releases/
No new digest content identified

IAVI – International AIDS Vaccine Initiative [to 1 October 2016]
https://www.iavi.org/
No new digest content identified

PATH [to 1 October 2016]
http://www.path.org/news/index.php
No new digest content identified

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Reports/Research/Analysis/Commentary/Conferences/Meetings/Book Watch/Tenders

Vaccines and Global Health: The Week in Review has expanded its coverage of new reports, books, research and analysis published independent of the journal channel covered in Journal Watch below. Our interests span immunization and vaccines, as well as global public health, health governance, and associated themes. If you would like to suggest content to be included in this service, please contact David Curry at: david.r.curry@centerforvaccineethicsandpolicy.org

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Journal Watch

Vaccines and Global Health: The Week in Review continues its weekly scanning of key peer-reviewed journals to identify and cite articles, commentary and editorials, books reviews and other content supporting our focus on vaccine ethics and policy. Journal Watch is not intended to be exhaustive, but indicative of themes and issues the Center is actively tracking. We selectively provide full text of some editorial and comment articles that are specifically relevant to our work. Successful access to some of the links provided may require subscription or other access arrangement unique to the publisher.

If you would like to suggest other journal titles to include in this service, please contact David Curry at: david.r.curry@centerforvaccineethicsandpolicy.org

American Journal of Infection Control
October 2016 Volume 44, Issue 10, p1083-1196, e167-e182
http://www.ajicjournal.org/current
Major Articles

Reasons for influenza vaccination underutilization: A case-control study

Scott S. Field
p1084–1088
Published in issue: October 01 2016

Abstract
Background
Influenza vaccines are underused.
Methods
Most (131/140) patients from a pediatric practice who were tested for influenza in the 2012-2013 season were enrolled. Medical records plus questionnaires determined vaccine and past disease histories and influenza vaccine attitudes. Influenza-negative tested cases (n=65) and negative controls (n=110) closely age-matched to 55 test-positive cases were compared with influenza-positive cases (n=66) regarding prior influenza, vaccine efficacy, and limited vaccine season conflicting with birth dates and preventative visit timing to determine possible validity of reasons given for underutilization.
Results
The most common parental reason for not vaccinating was lack of perceived need. History of previous influenza was significantly (P<.0001) associated with disease. Live attenuated vaccine rates were greater in controls than in influenza patients for ages 2-18 years (P<.005) and for ages 6-18 years (P<.0001), whereas injectable vaccine rates were not (P=.30 and P=.60, respectively). Most positive cases (59%) and controls (89%) had no prior influenza.
Conclusions
Prior influenza disease may be a risk factor for infection that could influence vaccination benefit. Live attenuated influenza vaccine outperformed trivalent inactivated influenza vaccine. Limited disease experience in individuals with low influenza vaccination rates, along with vaccine efficacy limitations, lends validity to some underutilization.
Clinical Case Study

Impact of the flu mask regulation on health care personnel influenza vaccine acceptance rates

Frances Edwards, Kevin D. Masick, Donna Armellino

p1154–1157
Published online: April 19, 2016

Abstract

Achieving high vaccination rates of health care personnel (HCP) is critical in preventing influenza transmission from HCP to patients and from patients to HCP; however, acceptance rates remain low. In 2013, New York State adopted the flu mask regulation, requiring unvaccinated HCP to wear a mask when in areas where patients are present. The purpose of this study assessed the impact of the flu mask regulation on the HCP influenza vaccination rate. A 13-question survey was distributed electronically and manually to the HCP to examine their knowledge of influenza transmission and the influenza vaccine and their personal vaccine acceptance history and perception about the use of the mask while working if not vaccinated. There were 1,905 respondents; 87% accepted the influenza vaccine, and 63% were first-time recipients who agreed the regulation influenced their vaccination decision. Of the respondents who declined the vaccine, 72% acknowledge HCP are at risk for transmitting influenza to patients, and 56% reported they did not receive enough information to make an educated decision. The flu mask protocol may have influenced HCP's choice to be vaccinated versus wearing a mask. The study findings supported that HCP may not have adequate knowledge on the morbidity and mortality associated with influenza. Regulatory agencies need to consider an alternative approach to increase HCP vaccination, such as mandating the influenza vaccine for HCP.

American Journal of Preventive Medicine
October 2016 Volume 51, Issue 4, p411-636, e91-e118
http://www.ajpmonline.org/current
[Reviewed earlier]

American Journal of Public Health
Volume 106, Issue 10 (October 2016)
http://ajph.aphapublications.org/toc/ajph/current
[Reviewed earlier]

American Journal of Tropical Medicine and Hygiene
September 2016; 95 (3)
http://www.ajtmh.org/content/current
[Reviewed earlier]

Annals of Internal Medicine
20 September 2016, Vol. 165. No. 6
http://annals.org/issue.aspx
[Reviewed earlier]

BMC Cost Effectiveness and Resource Allocation
http://resource-allocation.biomedcentral.com/
(Accessed 1 October 2016)
[No new content]

BMC Health Services Research
http://www.biomedcentral.com/bmchealthservres/content
Research article
Awareness and implementation of nine World Health Organization's patient safety solutions among three groups of healthcare workers in Oman
The pressing need to reduce burgeoning poor safety measures affecting millions worldwide has alerted World Health Assembly to set-up mechanisms to increase patient safety. In response to such needs, World Heal...
Ahmed Al-Mandhari, Ibrahim Al-Zakwani, Samir Al-Adawi, Samra Al-Barwani and Lakshmanan Jeyaseelan
BMC Health Services Research 2016 16:533
Published on: 30 September 2016

Research article
Mandating influenza vaccinations for health care workers: analysing opportunities for policy change using Kingdon's agenda setting framework
The consequences of annual influenza outbreaks are often underestimated by the general public. Influenza poses a serious public health threat around the world, particularly for the most vulnerable populations....
Angela Jackson-Lee, Neil G. Barr and Glen E. Randall
BMC Health Services Research 2016 16:522
Published on: 29 September 2016
Abstract
Background
The consequences of annual influenza outbreaks are often underestimated by the general public. Influenza poses a serious public health threat around the world, particularly for the most vulnerable populations. Fortunately, vaccination can mitigate the negative effects of this common infectious disease. Although inoculating frontline health care workers (HCWs) helps minimize disease transmission, some HCWs continue to resist participating in voluntary immunization programs. A potential solution to this problem is government-mandated vaccination for HCWs; however, in practice, there are substantial barriers to the adoption of such policies. The purpose of this paper is to identify the likelihood of adopting a policy for mandatory immunization of HCWs in Ontario based on a historical review of barriers to the agenda setting process.
Methods
Documents from secondary data sources were analysed using Kingdon's agenda setting framework of three converging streams leading to windows of opportunity for possible policy adoption.
Results

The problems, politics, and policies streams of Kingdon's framework have converged and diverged repeatedly over an extended period (policy windows have opened and closed several times). In each instance, a technically feasible solution was available. However, despite the evidence supporting the value of HCW immunization, alignment of the three agenda setting streams occurred for very short periods of time, during which, opposition lobby groups reacted, making the proposed solution less politically acceptable.
Conclusions
Prior to the adoption of any new policies, issues must reach a government's decision agenda. Based on Kingdon's agenda setting framework, this only occurs when there is alignment of the problems, politics, and policies streams. Understanding this process makes it easier to predict the likelihood of a policy being adopted, and ultimately implemented. Such learning may be applied to policy issues in other jurisdictions. In the case of mandatory influenza vaccinations for HCWs in Ontario, it seems highly unlikely that a new policy will be adopted until perception of the problem's importance is sufficient to overcome the political opposition to implementing a solution and thus, create a window of opportunity that is open long enough to support change.

Research article
Evaluation of medicine retail outlets for sale of typhoid fever vaccine among adults in two urban and rural settings in western Kenya: a proof-of-concept study
Private sector medicine outlets are an important provider of health services across the developing world, and are an untapped means of distributing and selling vaccines outside of childhood immunization progra...
Julius Ho, Gladys Odhiambo, Lucy W. Meng'anyi, Rosemary M. Musuva, Joseph M. Mule, Zakayo S. Alaly, Maurice R. Odiere, Pauline N. Mwinzi and Lisa Ganley-Leal
BMC Health Services Research 2016 16:527
Published on: 29 September 2016

BMC Infectious Diseases
http://www.biomedcentral.com/bmcinfectdis/content
(Accessed 1 October 2016)
Research article
A spatial model of Wild Poliovirus Type 1 in Kano State, Nigeria: calibration and assessment of elimination probability
Since the launch of the Global Polio Eradication Initiative, all but three countries (Nigeria, Pakistan, and Afghanistan) have apparently interrupted all wild poliovirus (WPV) transmission, and only one of thr...
Kevin A. McCarthy, Guillaume Chabot-Couture and Faisal Shuaib
BMC Infectious Diseases 2016 16:521
Published on: 29 September 2016

Research article
Influenza and pneumococcal vaccination in Australian adults: a systematic review of coverage and factors associated with uptake
In the absence of an adult vaccination register, coverage estimates for influenza and pneumococcal vaccination come from surveys and other data sources.
Amalie Dyda, Surendra Karki, Andrew Hayen, C. Raina MacIntyre, Robert Menzies, Emily Banks, John M. Kaldor and Bette Liu

BMC Infectious Diseases 2016 16:515
Published on: 26 September 2016

BMC Medical Ethics
http://www.biomedcentral.com/bmcmedethics/content
(Accessed 1 October 2016)
[No new content]

BMC Medicine
http://www.biomedcentral.com/bmcmed/content
(Accessed 1 October 2016)
Commentary
Medicine shortages: a commentary on causes and mitigation strategies
Swathi Iyengar, Lisa Hedman, Gilles Forte and Suzanne Hill
BMC Medicine 2016 14:124
Published on: 29 September 2016
Abstract
Shortages of medicines and vaccines have been reported in countries of all income levels in recent years. Shortages can result from one or multiple causes, including shortages of raw materials, manufacturing capacity problems, industry consolidation, marketing practices, and procurement and supply chain management. Existing approaches to mitigate shortages include advance notice systems managed through medicine regulatory authorities, special programmes that track medicines, and interventions to improve efficiency of the medicine supply chain. Redistribution of supplies at the national level can mitigate some shortages in the short term. International redistribution and exceptional regulatory approvals may be used in limited circumstances, with the understanding that such approaches are complex and may introduce cost and quality risks. If it is necessary to prioritise patients to receive a medicine that is in shortage, evidence-based practice should be used to ensure optimal allocation. Important steps in reducing medicine shortages and their impact include identifying medicines that are most at risk, developing reporting systems to share information on current and emerging shortages, and improving data from medicine supply chains.

Forum
The disease of corruption: views on how to fight corruption to advance 21st century global health goals
Tim K. Mackey, Jillian Clare Kohler, William D. Savedoff, Frank Vogl, Maureen Lewis, James Sale, Joshua Michaud and Taryn Vian
BMC Medicine 2016 14:149
Published on: 29 September 2016
Abstract
Corruption has been described as a disease. When corruption infiltrates global health, it can be particularly devastating, threatening hard gained improvements in human and economic development, international security, and population health. Yet, the multifaceted and complex nature of global health corruption makes it extremely difficult to tackle, despite its enormous costs, which have been estimated in the billions of dollars. In this forum article, we asked anti-corruption experts to identify key priority areas that urgently need global attention in order to

advance the fight against global health corruption. The views shared by this multidisciplinary group of contributors reveal several fundamental challenges and allow us to explore potential solutions to address the unique risks posed by health-related corruption. Collectively, these perspectives also provide a roadmap that can be used in support of global health anti-corruption efforts in the post-2015 development agenda.

BMC Pregnancy and Childbirth
http://www.biomedcentral.com/bmcpregnancychildbirth/content
(Accessed 1 October 2016)
[No new relevant content]

BMC Public Health
http://bmcpublichealth.biomedcentral.com/articles
(Accessed 1 October 2016)
[No new relevant content]

BMC Research Notes
http://www.biomedcentral.com/bmcresnotes/content
(Accessed 1 October 2016)
[No new relevant content]

BMJ Open
2016, Volume 6, Issue 9
http://bmjopen.bmj.com/content/current
[Reviewed earlier]

Bulletin of the World Health Organization
Volume 94, Number 10, October 2016, 709-784
http://www.who.int/bulletin/volumes/94/10/en/
RESEARCH
Adding interventions to mass measles vaccinations in India
Mira Johri, Stéphane Verguet, Shaun K Morris, Jitendar K Sharma, Usha Ram, Cindy Gauvreau, Edward Jones, Prabhat Jha & Mark Jit
http://dx.doi.org/10.2471/BLT.15.160044
Abstract
Objective
To quantify the impact on mortality of offering a hypothetical set of technically feasible, high-impact interventions for maternal and child survival during India's 2010–2013 measles supplementary immunization activity.
Methods
We developed Lives Saved Tool models for 12 Indian states participating in the supplementary immunization, based on state- and sex-specific data on mortality from India's Million Deaths Study and on health services coverage from Indian household surveys. Potential add-on

interventions were identified through a literature review and expert consultations. We quantified the number of lives saved for a campaign offering measles vaccine alone versus a campaign offering measles vaccine with six add-on interventions (nutritional screening and complementary feeding for children, vitamin A and zinc supplementation for children, multiple micronutrient and calcium supplementation in pregnancy, and free distribution of insecticide-treated bednets).
Findings
The measles vaccination campaign saved an estimated 19 016 lives of children younger than 5 years. A hypothetical campaign including measles vaccine with add-on interventions was projected to save around 73 900 lives (range: 70 200–79 300), preventing 73 700 child deaths (range: 70 000–79 000) and 300 maternal deaths (range: 200–400). The most effective interventions in the whole package were insecticide-treated bednets, measles vaccine and preventive zinc supplementation. Girls accounted for 66% of expected lives saved (12 712/19 346) for the measles vaccine campaign, and 62% of lives saved (45 721/74 367) for the hypothetical campaign including add-on interventions.
Conclusion
In India, a measles vaccination campaign including feasible, high-impact interventions could substantially increase the number of lives saved and mitigate gender-related inequities in child mortality.

Research
Estimation of child vaccination coverage at state and national levels in India
Pankaj Bhatnagar, Satish Gupta, Rakesh Kumar, Pradeep Haldar, Raman Sethi & Sunil Bahl
http://dx.doi.org/10.2471/BLT.15.167593
Abstract
Objective
To review the data, for 1999–2013, on state-level child vaccination coverage in India and provide estimates of coverage at state and national levels.
Methods
We collated data from administrative reports, population-based surveys and other sources and used them to produce annual estimates of vaccination coverage. We investigated bacille Calmette–Guérin vaccine, the first and third doses of vaccine against diphtheria, tetanus and pertussis, the third dose of oral polio vaccine and the first dose of vaccine against measles. We obtained relevant data covering the period 1999–2013 for each of 16 states and territories and the period 2001–2013 for the state of Jharkhand – which was only created in 2000. We aggregated the resultant state-level estimates, using a population-weighted approach, to give national values.
Findings
For each of the vaccinations we investigated, about half of the 253 estimates of annual coverage at state level that we produced were based on survey results. The rest were based on interpolation between – or extrapolation from – so-called anchor points or, more rarely, on administrative data. Our national estimates indicated that, for each of the vaccines we investigated, coverage gradually increased between 1999 and 2010 but then levelled off.
Conclusion
The delivery of routine vaccination services to Indian children appears to have improved between 1999 and 2013. There remains considerable scope to improve the recording and reporting of childhood vaccination coverage in India and regular systematic reviews of the coverage data are recommended.

Research
Essential medicines for cancer: WHO recommendations and national priorities
Jane Robertson, Ronald Barr, Lawrence N Shulman, Gilles B Forte & Nicola Magrini
http://dx.doi.org/10.2471/BLT.15.163998

Research
Neonatal mortality within 24 hours of birth in six low- and lower-middle-income countries
Abdullah H Baqui, Dipak K Mitra, Nazma Begum, Lisa Hurt, Seyi Soremekun, Karen Edmond, Betty Kirkwood, Nita Bhandari, Sunita Taneja, Sarmila Mazumder, Muhammad Imran Nisar, Fyezah Jehan, Muhammad Ilyas, Murtaza Ali, Imran Ahmed, Shabina Ariff, Sajid B Soofi, Sunil Sazawal, Usha Dhingra, Arup Dutta, Said M Ali, Shaali M Ame, Katherine Semrau, Fern M Hamomba, Caroline Grogan, Davidson H Hamer, Rajiv Bahl, Sachiyo Yoshida & Alexander Manu
http://dx.doi.org/10.2471/BLT.15.160945

PERSPECTIVES
Negotiating prices of drugs for rare diseases
Séverine Henrard & Francis Arickx
http://dx.doi.org/10.2471/BLT.15.163519

Child Care, Health and Development
September 2016 Volume 42, Issue 5 Pages 603–773
http://onlinelibrary.wiley.com/doi/10.1111/cch.v42.5/issuetoc
[Reviewed earlier]

Clinical Therapeutics
October 2016 Volume 38, Issue 10, Supplement, e1-e32
http://www.clinicaltherapeutics.com/issue/S0149-2918(16)X0014-8
[Reviewed earlier]

Complexity
September/October 2016 Volume 21, Issue S1 Pages 1–632
http://onlinelibrary.wiley.com/doi/10.1002/cplx.v21.6/issuetoc
[Reviewed earlier]

Conflict and Health
http://www.conflictandhealth.com/
[Accessed 1 October 2016]
[No relevant content identified]

Contemporary Clinical Trials
Volume 50, In Progress (September 2016)

http://www.sciencedirect.com/science/journal/15517144/50
[Reviewed earlier]

Current Opinion in Infectious Diseases
October 2016 - Volume 29 - Issue 5 pp: v-vi,433-537
http://journals.lww.com/co-infectiousdiseases/pages/currenttoc.aspx
[Reviewed earlier]

Developing World Bioethics
August 2016 Volume 16, Issue 2 Pages 61–120
http://onlinelibrary.wiley.com/doi/10.1111/dewb.2016.16.issue-2/issuetoc
[Reviewed earlier]

Development in Practice
Volume 24, Number 8
http://www.developmentinpractice.org/journals/volume-24-number-8
[Reviewed earlier]

Disasters
October 2016 Volume 40, Issue 4 Pages 589–815
http://onlinelibrary.wiley.com/doi/10.1111/disa.2016.40.issue-4/issuetoc
[Reviewed earlier]

Emerging Infectious Diseases
Volume 22, Number 10—October 2016
http://wwwnc.cdc.gov/eid/
[Reviewed earlier]

Epidemics
Volume 16, In Progress (September 2016)
http://www.sciencedirect.com/science/journal/17554365
[Reviewed earlier]

Epidemiology and Infection
Volume 144 - Issue 12 - September 2016
http://journals.cambridge.org/action/displayIssue?jid=HYG&tab=currentissue
[Reviewed earlier]

The European Journal of Public Health
Volume 26, Issue 4, 1 August 2016

http://eurpub.oxfordjournals.org/content/26/4
[Reviewed earlier]

Eurosurveillance
Volume 21, Issue 39, 29 September 2016
http://www.eurosurveillance.org/Public/Articles/Archives.aspx?PublicationId=11678
[New issue; No relevant content identified]

Global Health: Science and Practice (GHSP)
September 2016 | Volume 4 | Issue 3
http://www.ghspjournal.org/content/current
VIEWPOINTS
Moving Medicine, Moving Minds: Helping Developing Countries Overcome Barriers to Outsourcing Health Commodity Distribution to Boost Supply Chain Performance and Strengthen Health Systems
Senegal and other developing countries are improving access to health commodities by outsourcing supply chain logistics to private providers. To achieve broader, lasting reform, we must support further adoption of the outsourced model; assist country-led cost-benefit analyses; and help governments build capacity to manage contracts and overcome other barriers.
Priya Agrawal, Iain Barton, Roberto Dal Bianco, Dana Hovig, David Sarley, Prashant Yadav
Glob Health Sci Pract 2016;4(3):359-365. http://dx.doi.org/10.9745/GHSP-D-16-00130

ORIGINAL ARTICLES
Successful Implementation of a Multicountry Clinical Surveillance and Data Collection System for Ebola Virus Disease in West Africa: Findings and Lessons Learned
Despite resource and logistical constraints, International Medical Corps cared for thousands at 5 Ebola treatment units in Liberia and Sierra Leone between 2014 and 2015 while collecting hundreds of data points on each patient. To facilitate data collection and global reporting in future humanitarian responses, standardized data forms and databases, with clear definitions of clinical and epidemiological variables, should be developed and adopted by the international community.
Reshma Roshania, Michaela Mallow, Nelson Dunbar, David Mansary, Pranav Shetty, Taralyn Lyon, Kacey Pham, Matthew Abad, Erin Shedd, Anh-Minh A Tran, Sarah Cundy, Adam C Levine
Glob Health Sci Pract 2016;4(3):394-409. http://dx.doi.org/10.9745/GHSP-D-16-00186

Progress in Harmonizing Tiered HIV Laboratory Systems: Challenges and Opportunities in 8 African Countries
Countries have had mixed results in adhering to laboratory instrument procurement lists, with some limiting instrument brand expansion and others experiencing substantial growth in instrument counts and brand diversity. Important challenges to advancing laboratory harmonization strategies include:
:: Lack of adherence to procurement policies
:: Lack of an effective coordinating body
:: Misalignment of laboratory policies, treatment guidelines, and minimum service packages

Jason Williams, Farouk Umaru, Dianna Edgil, Joel Kuritsky
Glob Health Sci Pract 2016;4(3):467-480. http://dx.doi.org/10.9745/GHSP-D-16-00004

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in collaboration with the International Human Rights Clinic, University of Chicago Law School
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Volume 11 - Issue 03 - July 2016
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Debate
Clarifying the role of values in cost-effectiveness
Published online: 13 April 2016, pp. 439-443
Michael K. Gusmano, Gregory Kaebnick
DOI: http://dx.doi.org/10.1017/S1744133116000062

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Number 67 September 2016
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COMMENTARIES
People-centred health systems: building more resilient health systems in the wake of the Ebola crisis
Fred P. Martineau
Int. Health (2016) 8 (5): 307-309 doi:10.1093/inthealth/ihw029
Abstract
The 2014–2016 West African Ebola outbreak demonstrated the extent to which local social and political dynamics shape health system responses to crises such as epidemics. Many post-Ebola health system strengthening programmes are framed around a notion of health system 'resilience' that focuses on global rather than local priorities and fails to account for key local social dynamics that shape crisis responses. Post-crisis health system strengthening efforts require a shift towards a more 'people-centred' understanding of resilience that attends to the people, relationships and local contexts that constitute health systems and the practices that produce crisis responses.

REVIEW
Development of drugs for severe malaria in children
Phaik Yeong Cheah, Michael Parker, and Arjen M. Dondorp
Int. Health (2016) 8 (5): 313-316 doi:10.1093/inthealth/ihw038
Abstract

Over 90% of deaths attributable to malaria are in African children under 5 years old. Yet, new treatments are often tested primarily in adult patients and extrapolations have proven to be sometimes invalid, especially in dosing regimens. For studies in severe malaria an additional complication is that the decline in severe malaria in adult patients precludes sufficiently powered trials in adults, before the intervention can be tested in the ultimate target group, paediatric severe malaria. In this paper we propose an alternative pathway to the development of drugs for use in paediatric severe malaria. We argue that following the classical phase I and II studies, small safety and efficacy studies using well-chosen surrogate endpoints in adult severe malaria be conducted, instead of larger mortality endpoint trials. If the drug appears safe and promising small pilot studies in paediatric severe malaria using the same endpoints can follow. Finally, with carefully observed safeguards in place to ensure high ethical standards, promising candidate interventions can be taken forward into mortality endpoint, well-powered, large paediatric studies in African children with severe malaria. Given the available research capacity, limited numbers of prudently selected interventions can be studied in phase III trials, and adaptive designs should be considered.

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September 27, 2016, Vol 316, No. 12
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Viewpoint
Hepatitis C Virus—From Discovery to Cure: The 2016 Lasker-DeBakey Clinical Medical Research Award
Ralf F. W. Bartenschlager, PhD; Charles M. Rice, PhD; Michael J. Sofia, PhD
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Lancet Global Health
Oct 2016 Volume 4 Number 10 e663-e760
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Editorial
Financing for health: where there's a will...
The Lancet Global Health
Open Access
DOI: http://dx.doi.org/10.1016/S2214-109X(16)30226-1
On Aug 23, WHO quietly released a report that should be essential reading for all. Coming 15 years after the Abuja Declaration by African governments to commit to spending 15% of annual domestic budgets on health, concludes with a stark analysis: "For every US$100 that goes into state coffers in Africa, on average US$16 is allocated to health, only US$10 is in effect spent, and less than US$4 goes to the right health services."

The analysis is a timely reminder that the issue of domestic health financing is not simply a function of economic development. Indeed, the report shows clearly that increased gross domestic product (GDP) in Africa over the past 15 years has rarely led to increased government spending on health, and current figures show that the average proportion of public expenditure on health of 10% applies to countries across all levels of the income spectrum. In fact DR Congo, at a GDP of $476, allocates 11% of public expenditure to health, whereas Botswana, with its 13 times greater GDP of $6041 allocates only 9%.

The 2016 Africa Data Report released by the advocacy organisation ONE on the same day presents complementary findings, including an analysis of the amount spent on health per capita. The High-level Taskforce on Innovative International Financing for Health Systems calculated that the amount of spending necessary to provide a package of key basic health services in low-income countries is $54 (in 2005 prices). The ONE report illustrates the vast

range of current per-capita health spending across sub-Saharan Africa, with eight countries spending at least double this figure, but 29 countries spending less than half of it.

In many cases, health has actually been shifted further down the agenda as a country's financial prosperity has increased. The WHO report's authors put this down to several factors, including poor coordination between ministries of health and finance; unstable funding flows (both domestic and donor) that hamper health sector planning, contribute to poor performance, and thus compound health's lower priority; and continued low revenue generation through taxation even as GDP rises, leaving little "fiscal space" for allocation to health.

Beyond health sector allocation, however, the WHO report highlights an all-too-commonplace failure to actually spend the money set aside for health. The authors estimate that, across Africa, 10–30% of budgets authorised to be devoted to health remain unspent, particularly funds destined for infrastructure. These failures seem to come down to a fundamental deficiency in public expenditure management, and are an obvious yet under-recognised target for analysis and reform.

Finally, the report drills down into the question of spending prioritisation within the health sector itself. Evidence shows that recent increases in health expenditure in Africa have not tended to favour expansion of primary care services nor those most accessible to poorer people. Indeed, less than 40% of public expenditure is estimated to be spent on primary care in most African countries. Furthermore, even when coverage has expanded, subsidisation has not necessarily followed, resulting in a continued skewing of catastrophic expenditure towards the lowest income sectors. The quality of the services provided is another crucial issue, the report finds, since bellwether indicators such as maternal mortality ratio can vary from less than 250 to almost 1500 per 100 000 livebirths for the same level of health expenditure (in this case $200 per capita).

What are the recommendations, then? Revenue (ie, tax) collection is a key target for strengthening, and, as outlined in a recent blog by José Luis Castro, tobacco taxation is a prime candidate. Castro points to the Philippines' "sin tax" reform as a model: not only does it simplify the country's previously complex tax structure and enshrine it in law, it directs the proceeds towards a defined health benefit—ie, the country's universal health-care programme. Such identification of defined benefits and alignment with appropriate payment mechanisms is another key recommendation of the WHO report, and feeds into the need for better engagement between ministries of health and finance and cultivation of long-term, sustainable sources of health financing. Castro praises the Philippines' then Undersecretary of Finance, Jeremias Paul, for bridging the gap, and calls for more such role models to come forward. President Xi Jinping of China's recent public statement that health authorities alone cannot ensure a healthy populace was a landmark step: which African leader will follow?

Comment

Global trends in vaccination coverage

Published: 25 August 2016

Michiel van Boven, Alies van Lier

Universal vaccination programmes have greatly reduced the burden of infectious diseases in both developing and developed countries.1, 2, 3 In the 1960s and 1970s, these reductions led to optimism that a victory in the battle against infectious diseases could be within reach.

Unfortunately, even though the benefits of most childhood vaccinations are scientifically unquestioned, vaccination coverage rates are far from 100% in many countries, and show substantial variation. Early detection of trends and an improved understanding of underlying mechanisms are paramount to be able to improve vaccination policies.

In The Lancet Global Health, Alexandre de Figueiredo and colleagues[4] take a step in this direction with their time-series analysis of trends in vaccine coverage and a suite of socioeconomic and demographic factors across 190 countries over 30 years. The main aim was to gauge where and when vaccination coverage might fall below levels that are safe for prevention of epidemic transmission, and to correlate such decreases with underlying socioeconomic and demographic factors.

The investigators used WHO–UNICEF coverage estimates of three doses of diphtheria, tetanus, and pertussis (DTP3) vaccination and obtained data from Gapminder. By use of a statistical framework based on Gaussian process regression and a newly developed vaccine performance index, which forecasts that vaccination coverage will be at a safe level (90%) in the near future, the analyses yield some interesting results next to the basic fact that worldwide coverage has increased. For instance, gross domestic product (GDP) and government health spending correlate most strongly with vaccination coverage in Eastern Mediterranean countries between 1980 and 2010, whereas primary school completion correlates most strongly with vaccination coverage in Africa (more so than does GDP). The analyses also provide a list of countries with high to low vaccine performance indices, showing that many of the countries at the low end of the list are in sub-Saharan Africa, the Indian subcontinent, and southeast Asia. From a global public health perspective, the list provides an objective measure that can be used to prioritise countries or regions where efforts to increase vaccination coverage are expected to be most efficient.

Notably, although vaccination coverage correlates well with GDP and schooling in many regions of the world, this is not the case any more in Europe and, to a lesser extent, North America. Here, no socioeconomic factors correlated with high coverage, and one argument is that once the basic necessities of life are available, other factors such as social attitudes to vaccination might become more important.[5], [6] Because of the focus on socioeconomic factors, de Figueiredo and colleagues' findings cannot add much more than speculation to this argument, and it will be interesting to see the outcomes when the set of variables is extended to encompass social indicators that might shape vaccine hesitancy.[7]

With a focus on global immunisation patterns and the relation with socioeconomic factors, the investigators have painted a picture with broad brushes, one that cannot hope to unravel patterns that are important in specific regions or countries and for particular diseases. Examples are the difficulties encountered in the push towards eradication of polio in Afghanistan and Pakistan driven by war and extreme ideologies,[8] the struggle to achieve elimination of measles in Europe given vaccine refusal in clustered religious and anthroposophical groups, and the perceived lack of safety of the human papillomavirus vaccine fuelled by adverse events after vaccination.[9] These examples show that a full understanding of local coverage patterns requires data and analyses at the local level.

Technically, the vaccine performance index might have to be developed further. The index provides an aggregate measure that takes both vaccination coverage and changes in coverage

into account. One could argue that in its current form the vaccine performance index punishes countries with systematically high but volatile vaccination coverage (eg, Norway) quite strongly. In fact, low vaccine performance indices in these countries might be due to reporting bias or small sample sizes (in cases when a national registry is not available). Indeed, in developing countries, precise figures for vaccination coverage are often not available, and estimation of vaccination coverage is not always straightforward.[10], [11] Future developments will probably have to incorporate the uncertainty in vaccination coverage estimates to prevent artificial increases in the precision of the correlations.

Overall, de Figueiredo and colleagues have provided a laudable analysis of the link between vaccination coverage rates and demographic and socioeconomic factors at the global scale. In addition to providing an overview of trends and potential explanations, an important merit of the study is that it forces us to think about the factors that determine vaccination coverage now and in the future…

Articles

Forecasted trends in vaccination coverage and correlations with socioeconomic factors: a global time-series analysis over 30 years

Alexandre de Figueiredo, Iain G Johnston, David M D Smith, Sumeet Agarwal, Heidi J Larson, Nick S Jones

Summary

Background

Incomplete immunisation coverage causes preventable illness and death in both developing and developed countries. Identification of factors that might modulate coverage could inform effective immunisation programmes and policies. We constructed a performance indicator that could quantitatively approximate measures of the susceptibility of immunisation programmes to coverage losses, with an aim to identify correlations between trends in vaccine coverage and socioeconomic factors.

Methods

We undertook a data-driven time-series analysis to examine trends in coverage of diphtheria, tetanus, and pertussis (DTP) vaccination across 190 countries over the past 30 years. We grouped countries into six world regions according to WHO classifications. We used Gaussian process regression to forecast future coverage rates and provide a vaccine performance index: a summary measure of the strength of immunisation coverage in a country.

Findings

Overall vaccine coverage increased in all six world regions between 1980 and 2010, with variation in volatility and trends. Our vaccine performance index identified that 53 countries had more than a 50% chance of missing the Global Vaccine Action Plan (GVAP) target of 90% worldwide coverage with three doses of DTP (DTP3) by 2015. These countries were mostly in sub-Saharan Africa and south Asia, but Austria and Ukraine also featured. Factors associated with DTP3 immunisation coverage varied by world region: personal income (Spearman's $\rho=0{\cdot}66$, $p=0{\cdot}0011$) and government health spending ($0{\cdot}66$, $p<0{\cdot}0001$) were informative of immunisation coverage in the Eastern Mediterranean between 1980 and 2010, whereas primary school completion was informative of coverage in Africa ($0{\cdot}56$, $p<0{\cdot}0001$) over the same period. The proportion of births attended by skilled health staff correlated significantly with immunisation coverage across many world regions.

Interpretation

Our vaccine performance index highlighted countries at risk of failing to achieve the GVAP target of 90% coverage by 2015, and could aid policy makers' assessments of the strength and resilience of immunisation programmes. Weakening correlations with socioeconomic factors show a need to tackle vaccine confidence, whereas strengthening correlations point to clear factors to address.

Funding
UK Engineering and Physical Sciences Research Council.

The Lancet Infectious Diseases

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http://www.thelancet.com/journals/laninf/issue/current

Editorial

Time for global political action on antimicrobial resistance

The Lancet Infectious Diseases

Comment

A malaria vaccine in children with HIV

James G Beeson, Freya J I Fowkes

Plasmodium falciparum is the major cause of malaria cases and deaths globally, particularly in sub-Saharan Africa where HIV is also highly prevalent.1,2 The primary target population of a malaria vaccine is young children, and more than 2 million children in sub-Saharan Africa are infected with HIV.2 Therefore, many HIV-infected children could benefit from a malaria vaccine, especially because HIV might increase the risk and severity of malaria.3,4 In The Lancet Infectious Diseases, Lucas Otieno and colleagues5 now report the findings of a randomised controlled trial of RTS,S/AS01, the most advanced malaria vaccine, in HIV-infected children…

Comment

Age of human papillomavirus vaccination?

Philip E Castle, Emily A Burger

Evidence is overwhelming to show that prophylactic human papillomavirus (HPV) vaccines are very safe and highly efficacious in the prevention of HPV infections and related cervical precancerous lesions detected by cytology in clinical trials and HPV-vaccinated populations. These precancerous lesions, when detected by cytology and treated in a timely manner, have been credited with reductions in cervical cancer incidence and mortality. Thus, it is simply a matter of time before HPV vaccination will be shown to reduce cervical cancer and other HPV-related cancers…

Articles

Comparison of artesunate–mefloquine and artemether–lumefantrine fixed-dose combinations for treatment of uncomplicated Plasmodium falciparum malaria in children younger than 5 years in sub-Saharan Africa: a randomised, multicentre, phase 4 trial

Sodiomon B Sirima, Bernhards Ogutu, John P A Lusingu, Ali Mtoro, Zakayo Mrango, Alphonse Ouedraogo, Jean Baptiste Yaro, Kevin Omondi Onyango, Samwel Gesase, Ernest Mnkande, James Samwel Ngocho, Isabelle Ackermann, François Aubin, Joelle Vanraes, Nathalie Strub, Gwenaelle Carn

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Open Access

Summary

Background

WHO recommends combinations of an artemisinin derivative plus an antimalarial drug of longer half-life as treatment options for uncomplicated Plasmodium falciparum infection. In Africa, artemether–lumefantrine is the most widely used artemisinin-based combination therapy, whereas artesunate–mefloquine is used infrequently because of a perceived poor tolerance to mefloquine. WHO recommends reconsideration of the use of artesunate–mefloquine in Africa. We compared the efficacy and safety of fixed-dose artesunate–mefloquine with that of artemether–lumefantrine for treatment of children younger than 5 years with uncomplicated P falciparum malaria.

Methods

We did this multicentre, phase 4, open-label, non-inferiority trial in Burkina Faso, Kenya, and Tanzania. Children aged 6–59 months with uncomplicated malaria were randomly assigned (1:1), via a computer-generated randomisation list, to receive 3 days' treatment with either one or two artesunate–mefloquine tablets (25 mg artesunate and 55 mg mefloquine) once a day or one or two artemether–lumefantrine tablets (20 mg artemether and 120 mg lumefantrine) twice a day. Parasitological assessments were done independently by two microscopists who were blinded to treatment allocation. The primary outcome was the PCR-corrected rate of adequate clinical and parasitological response (ACPR) at day 63 in the per-protocol population. Non-inferiority was shown if the lower limit of the 95% CI for the difference between groups was greater than −5%. Early vomiting was monitored and neuropsychiatric status assessed regularly during follow-up. This study is registered with ISRCTN, number ISRCTN17472707, and the Pan African Clinical Trials Registry, number PACTR201202000278282.

Findings

945 children were enrolled and randomised, 473 to artesunate–mefloquine and 472 to artemether–lumefantrine. The per-protocol population consisted of 407 children in each group. The PCR-corrected ACPR rate at day 63 was 90·9% (370 patients) in the artesunate–mefloquine group and 89·7% (365 patients) in the artemether–lumefantrine group (treatment difference 1·23%, 95% CI −2·84% to 5·29%). At 72 h after the start of treatment, no child had detectable parasitaemia and less than 6% had fever, with a similar number in each group (21 in the artesunate–mefloquine group vs 24 in the artemether–lumefantrine group). The safety profiles of artesunate–mefloquine and artemether–lumefantrine were similar, with low rates of early vomiting (71 [15·3%] of 463 patients in the artesunate–mefloquine group vs 79 [16·8%] of 471 patients in the artemether–lumefantrine group in any of the three dosing days), few neurological adverse events (ten [2·1%] of 468 vs five [1·1%] of 465), and no detectable psychiatric adverse events.

Interpretation

Artesunate–mefloquine is effective and safe, and an important treatment option, for children younger than 5 years with uncomplicated P falciparum malaria in Africa.

Funding

Agence Française de Développement, France; Department for International Development, UK; Dutch Ministry of Foreign Affairs, Netherlands; European and Developing Countries Clinical Trials Partnership; Fondation Arpe, Switzerland; Médecins Sans Frontières; Swiss Agency for Development and Cooperation, Switzerland.

Articles

Safety and immunogenicity of RTS,S/AS01 malaria vaccine in infants and children with WHO stage 1 or 2 HIV disease: a randomised, double-blind, controlled trial

Lucas Otieno, Martina Oneko, Walter Otieno, Joseph Abuodha, Emmanuel Owino, Chris Odero, Yolanda Guerra Mendoza, Ben Andagalu, Norbert Awino, Karen Ivinson, Dirk Heerwegh, Nekoye Otsyula, Maria Oziemkowska, Effua Abigail Usuf, Allan Otieno, Kephas Otieno, Didier Leboulleux, Amanda Leach, Janet Oyieko, Laurence Slutsker, Marc Lievens, Jessica Cowden, Didier Lapierre, Simon Kariuki, Bernhards Ogutu, Johan Vekemans, Mary J Hamel

Summary

Background

Malaria remains a major global public health concern, especially in sub-Saharan Africa. The RTS,S/AS01 malaria candidate vaccine was reviewed by the European Medicines Agency and received a positive scientific opinion; WHO subsequently recommended pilot implementation in sub-Saharan African countries. Because malaria and HIV overlap geographically, HIV-infected children should be considered for RTS,S/AS01 vaccination. We therefore aimed to assess the safety of RTS,S/AS01 in HIV-infected children at two sites in western Kenya.

Methods

We did a randomised, double-blind, controlled trial at the clinical trial sites of the Kenya Medical Research Institute (KEMRI)–Walter Reed Army Institute of research in Kisumu and the KEMRI/US Centers for Disease Control and Prevention in Siaya. Eligible participants were infants and children aged from 6 weeks to 17 months with WHO stage 1 or 2 HIV disease (documented positive by DNA PCR), whether or not they were receiving antiretroviral therapy (ART). We randomly assigned participants (1:1) to receive three doses of either RTS,S/AS01 or rabies vaccine (both 0·5 mL per dose by intramuscular injection), given once per month at 0, 1, and 2 months. We did the treatment allocation using a web-based central randomisation system stratified by age (6 weeks–4 months, 5–17 months), and by baseline CD4% (<10, 10–14, 15–19, and ≥20). Data were obtained in an observer-blind manner, and the vaccine recipient, their parent or carer, the funder, and investigators responsible for the assessment of endpoints were all masked to treatment allocation (only staff responsible for the preparation and administration of the vaccines were aware of the assignment and these individuals played no other role in the study). We provided ART, even if the participants were not receiving ART before the study, and daily co-trimoxazole for prevention of opportunistic infections. The primary outcome was the occurrence of serious adverse events until 14 months after dose 1 of the vaccine, assessed in the intention-to-treat population. This trial was registered at ClinicalTrials.gov, number NCT01148459.

Findings

Between July 30, 2010, and May 24, 2013, we enrolled 200 children to our study and randomly assigned 99 to receive RTS,S/AS01 and 101 to receive rabies vaccine. 177 (89%) of the 200 children enrolled completed 14 months of follow-up. Serious adverse events were noted in 41 (41·4%, 95% CI 31·6–51·8) of 99 RTS,S/AS01 recipients and 37 (36·6%, 27·3–46·8) of 101 rabies-vaccine recipients (relative risk 1·1, 95% CI 0·8–1·6). 20 (20·2%, 95% CI 12·8–29·5) of 99 RTS,S/AS01 recipients and 12 (11·9%, 6·3–19·8) of 101 rabies-vaccine recipients had at least one serious adverse event within 30 days after vaccination, mainly pneumonia, febrile convulsions, and salmonella sepsis. Five (5·1%, 95% CI 1·7–11·4) of 99 RTS,S/AS01 recipients and four (4·0%, 1·1–9·8) of 101 rabies-vaccine recipients died, but no deaths were deemed related to vaccination. Mortality was associated with five cases of pneumonia (1% RTS,S/AS01 recipients vs 3% rabies-vaccine recipients), five cases of gastroenteritis (3% RTS,S/AS01 recipients vs 2% rabies-vaccine recipients), five cases of malnutrition (2% RTS,S/AS01 recipients vs 3% rabies-vaccine recipients), one case of sepsis (1% rabies-vaccine recipients),

one case of Haemophilus influenza meningitis (1% rabies-vaccine recipients), and one case of tuberculosis (1% RTS,S/AS01 recipients).
Interpretation
RTS, S/AS01 was well tolerated when given to children with WHO clinical stage 1 or 2 HIV disease along with high antiretroviral and co-trimoxazole use. Children with HIV disease could be included in future RTS,S/AS01 vaccination programmes.
Funding
GlaxoSmithKline Biologicals SA and PATH Malaria Vaccine Initiative.

Articles

Efficacy, safety, and immunogenicity of the human papillomavirus 16/18 AS04-adjuvanted vaccine in women older than 25 years: 7-year follow-up of the phase 3, double-blind, randomised controlled VIVIANE study

Cosette M Wheeler, S Rachel Skinner, M Rowena Del Rosario-Raymundo, Suzanne M Garland, Archana Chatterjee, Eduardo Lazcano-Ponce, Jorge Salmerón, Shelly McNeil, Jack T Stapleton, Céline Bouchard, Mark G Martens, Deborah M Money, Swee Chong Quek, Barbara Romanowski, Carlos S Vallejos, Bram ter Harmsel, Vera Prilepskaya, Kah Leng Fong, Henry Kitchener, Galina Minkina, Yong Kuei Timothy Lim, Tanya Stoney, Nahida Chakhtoura, Margaret E Cruickshank, Alevtina Savicheva, Daniel Pereira da Silva, Murdo Ferguson, Anco C Molijn, Wim G V Quint, Karin Hardt, Dominique Descamps, Pemmaraju V Suryakiran, Naveen Karkada, Brecht Geeraerts, Gary Dubin, Frank Struyf, VIVIANE Study Group

Summary
Background
Although the risk of human papillomavirus (HPV) infection is greatest in young women, women older than 25 years remain at risk. We present data from the VIVIANE study of the HPV 16/18 AS04-adjuvanted vaccine in adult women after 7 years of follow-up.
Methods
In this phase 3, double-blind, randomised controlled trial, healthy women older than 25 years were enrolled (age stratified: 26–35 years, 36–45 years, and ≥46 years). Up to 15% in each age stratum had a history of HPV infection or disease. Women were randomly assigned (1:1) to receive HPV 16/18 vaccine or aluminium hydroxide control, with an internet-based system. The primary endpoint was vaccine efficacy against 6-month persistent infection or cervical intraepithelial neoplasia grade 1 or greater (CIN1+) associated with HPV 16/18. We did analyses in the according-to-protocol cohort for efficacy and total vaccinated cohort. Data for the combined primary endpoint in the according-to-protocol cohort for efficacy were considered significant when the lower limit of the 96·2% CI around the point estimate was greater than 30%. For all other endpoints and cohorts, data were considered significant when the lower limit of the 96·2% CI was greater than 0%. This study is registered with ClinicalTrials.gov, number NCT00294047.
Findings
The first participant was enrolled on Feb 16, 2006, and the last study visit took place on Jan 29, 2014. 4407 women were in the according-to-protocol cohort for efficacy (n=2209 vaccine, n=2198 control) and 5747 women in the total vaccinated cohort (n=2877 vaccine, n=2870 control). At month 84, in women seronegative for the corresponding HPV type in the according-to-protocol cohort for efficacy, vaccine efficacy against 6-month persistent infection or CIN1+ associated with HPV 16/18 was significant in all age groups combined (90·5%, 96·2% CI 78·6–96·5). Vaccine efficacy against HPV 16/18-related cytological abnormalities (atypical squamous cells of undetermined significance and low-grade squamous intraepithelial lesion) and CIN1+

was also significant. We also noted significant cross-protective efficacy against 6-month persistent infection with HPV 31 (65·8%, 96·2% CI 24·9–85·8) and HPV 45 (70·7%, 96·2% CI 34·2–88·4). In the total vaccinated cohort, vaccine efficacy against CIN1+ irrespective of HPV was significant (22·9%, 96·2% CI 4·8–37·7). Serious adverse events related to vaccination occurred in five (0·2%) of 2877 women in the vaccine group and eight (0·3%) of 2870 women in the control group.
Interpretation
In women older than 25 years, the HPV 16/18 vaccine continues to protect against infections, cytological abnormalities, and lesions associated with HPV 16/18 and CIN1+ irrespective of HPV type, and infection with non-vaccine types HPV 31 and HPV 45 over 7 years of follow-up.
Funding
GlaxoSmithKline Biologicals SA.

Review
Malaria elimination in India and regional implications
Kinley Wangdi, Michelle L Gatton, Gerard C Kelly, Cathy Banwell, Vas Dev, Archie C A Clements
Summary
The malaria situation in India is complex as a result of diverse socio-environmental conditions. India contributes a substantial burden of malaria outside sub-Saharan Africa, with the third highest Plasmodium vivax prevalence in the world. Successful malaria control in India is likely to enhance malaria elimination efforts in the region. Despite modest gains, there are many challenges for malaria elimination in India, including: varied patterns of malaria transmission in different parts of the country demanding area-specific control measures; intense malaria transmission fuelled by favourable climatic and environment factors; varying degrees of insecticide resistance of vectors; antimalarial drug resistance; a weak surveillance system; and poor national coordination of state programmes. Prevention and protection against malaria are low as a result of a weak health-care system, as well as financial and socioeconomic constraints. Additionally, the open borders of India provide a potential route of entry for artesunate-resistant parasites from southeast Asia. This situation calls for urgent dialogue around tackling malaria across borders—between India's states and neighbouring countries—through sharing of information and coordinated control and preventive measures, if we are to achieve the aim of malaria elimination in the region.

Maternal and Child Health Journal
Volume 20, Issue 9, September 2016
http://link.springer.com/journal/10995/20/9/page/1
[Reviewed earlier]

Medical Decision Making (MDM)
October 2016; 36 (7)
http://mdm.sagepub.com/content/current
[Reviewed earlier]

The Milbank Quarterly
A Multidisciplinary Journal of Population Health and Health Policy

September 2016 Volume 94, Issue 3 Pages 437–694
http://onlinelibrary.wiley.com/doi/10.1111/milq.2016.94.issue-3/issuetoc
[Reviewed earlier]

Nature
Volume 537 Number 7622 pp585-706 29 September 2016
http://www.nature.com/nature/current_issue.html
[New issue; No relevant digest content identified]

Nature Medicine
September 2016, Volume 22 No 9 pp963-1061
http://www.nature.com/nm/journal/v22/n9/index.html
[Reviewed earlier]

Nature Reviews Immunology
September 2016 Vol 16 No 9
http://www.nature.com/nri/journal/v16/n9/index.html
[Reviewed earlier]

New England Journal of Medicine
September 29, 2016 Vol. 375 No. 13
http://www.nejm.org/toc/nejm/medical-journal
Perspective
Considerations for Developing a Zika Virus Vaccine [Free full text]
H.D. Marston, N. Lurie, L.L. Borio, and A.S. Fauci

Fast-Track Zika Vaccine Development — Is It Possible? [Free full text]
S.J. Thomas, M. L'Azou, A.D.T. Barrett, and N.A.C. Jackson

Clinical Practice
Influenza Vaccination
John J. Treanor, M.D.
N Engl J Med 2016; 375:1261-1268 September 29, 2016
DOI: 10.1056/NEJMcp1512870
Influenza vaccines confer considerable but incomplete protection and are recommended for everyone. The Advisory Committee on Immunization Practices does not endorse a specific vaccine but recommends against the live attenuated vaccine during 2016–2017 in the United States.

Pediatrics
September 2016, VOLUME 138 / ISSUE 3
http://pediatrics.aappublications.org/content/138/3?current-issue=y
[Reviewed earlier]

Pharmaceutics
Volume 8, Issue 3 (September 2016)
http://www.mdpi.com/1999-4923/8/3
[Reviewed earlier

PharmacoEconomics
Volume 34, Issue 9, September 2016
http://link.springer.com/journal/40273/34/9/page/1
[Reviewed earlier]

PLOS Currents: Disasters
http://currents.plos.org/disasters/
[Accessed 1 October 2016]
[No new relevant content identified]

PLoS Currents: Outbreaks
http://currents.plos.org/outbreaks/
[No new content]

PLoS Medicine
http://www.plosmedicine.org/
(Accessed 1 October 2016)
[No new relevant content identified]

PLoS Neglected Tropical Diseases
http://www.plosntds.org/
[Accessed 1 October 2016]
Research Article
Model-Informed Risk Assessment and Decision Making for an Emerging Infectious Disease in the Asia-Pacific Region
Robert Moss, Roslyn I. Hickson, Jodie McVernon, James M. McCaw, Krishna Hort, Jim Black, John R. Madden, Nhi H. Tran, Emma S. McBryde, Nicholas Geard
| published 23 Sep 2016 PLOS Neglected Tropical Diseases
http://dx.doi.org/10.1371/journal.pntd.0005018
Abstract
Background
Effective response to emerging infectious disease (EID) threats relies on health care systems that can detect and contain localised outbreaks before they reach a national or international scale. The Asia-Pacific region contains low and middle income countries in which the risk of EID outbreaks is elevated and whose health care systems may require international support to effectively detect and respond to such events. The absence of comprehensive data on

populations, health care systems and disease characteristics in this region makes risk assessment and decisions about the provision of such support challenging.
Methodology/principal findings
We describe a mathematical modelling framework that can inform this process by integrating available data sources, systematically explore the effects of uncertainty, and provide estimates of outbreak risk under a range of intervention scenarios. We illustrate the use of this framework in the context of a potential importation of Ebola Virus Disease into the Asia-Pacific region. Results suggest that, across a wide range of plausible scenarios, preemptive interventions supporting the timely detection of early cases provide substantially greater reductions in the probability of large outbreaks than interventions that support health care system capacity after an outbreak has commenced.
Conclusions/significance
Our study demonstrates how, in the presence of substantial uncertainty about health care system infrastructure and other relevant aspects of disease control, mathematical models can be used to assess the constraints that limited resources place upon the ability of local health care systems to detect and respond to EID outbreaks in a timely and effective fashion. Our framework can help evaluate the relative impact of these constraints to identify resourcing priorities for health care system support, in order to inform principled and quantifiable decision making.
Author Summary
Low and middle income countries face a serious challenge when confronting emerging infectious disease (EID) threats. Their risk of experiencing outbreaks can be greater than in many high income countries, while their capacity to respond effectively may be constrained by competing demands on limited health care system resources. The globalised nature of health security argues for international support to improve local health care systems, but limited data makes risk assessment and decision making difficult. We propose a mathematical modelling framework that can help explore a variety of outbreak and intervention scenarios. Our framework can assist with the identification of constraints that limit the ability of local health care systems to detect and respond to EID outbreaks in a timely and effective fashion, and assess the relative importance of these constraints to help establish priorities for health care system support. We illustrate the use of our framework by considering the importation of Ebola into the Asia-Pacific region, with results emphasising the critical role played by effective surveillance in controlling localised outbreaks.

PLoS One
http://www.plosone.org/
[Accessed 1 October 2016]
Research Article
Potential Cost-Effectiveness of RSV Vaccination of Infants and Pregnant Women in Turkey: An Illustration Based on Bursa Data
Koen B. Pouwels, Sefika E. Bozdemir, Selen Yegenoglu, Solmaz Celebi, E. David McIntosh, Serhat Unal, Maarten J. Postma, Mustafa Hacimustafaoglu
| published 30 Sep 2016 PLOS ONE
http://dx.doi.org/10.1371/journal.pone.0163567

PLoS Pathogens

http://journals.plos.org/plospathogens/
(Accessed 1 October 2016)
[No new relevant content identified]

PNAS - Proceedings of the National Academy of Sciences of the United States of America
http://www.pnas.org/content/early/
(Accessed 1 October 2016)
Social Sciences - Economic Sciences:
Innovation network
Daron Acemoglu, Ufuk Akcigit, and William R. Kerr
PNAS 2016 ; published ahead of print September 28, 2016, doi:10.1073/pnas.1613559113
Significance
We describe the strength and importance of the innovation network that links patenting technology fields together. We quantify that technological advances spill out of individual fields and enrich the work of neighboring technologies, but these spillovers are also localized and not universal. Thus, innovation advances in one part of the network can significantly impact nearby disciplines but rarely those very far away. We verify the strength and stable importance of the innovation network by showing how past innovations can predict future innovations in other fields over 10-y horizons. This better understanding of how scientific progress occurs and how inventions build upon themselves is an important input to our depictions of the cumulative process of innovation and its economic growth consequences.
Abstract
Technological progress builds upon itself, with the expansion of invention in one domain propelling future work in linked fields. Our analysis uses 1.8 million US patents and their citation properties to map the innovation network and its strength. Past innovation network structures are calculated using citation patterns across technology classes during 1975–1994. The interaction of this preexisting network structure with patent growth in upstream technology fields has strong predictive power on future innovation after 1995. This pattern is consistent with the idea that when there is more past upstream innovation for a particular technology class to build on, then that technology class innovates more.

Prehospital & Disaster Medicine
Volume 31 - Issue 5 - October 2016
https://www.cambridge.org/core/journals/prehospital-and-disaster-medicine/latest-issue
[New issue; No relevant content identified]

Preventive Medicine
Volume 90, Pages 1-222 (September 2016)
http://www.sciencedirect.com/science/journal/00917435/90
[Reviewed earlier]

Proceedings of the Royal Society B
10 February 2016; volume 283, issue 1824

http://rspb.royalsocietypublishing.org/content/283/1824?current-issue=y
[Reviewed earlier]

Public Health Ethics
Volume 9 Issue 1 October 2016
http://phe.oxfordjournals.org/content/current
[Reviewed earlier]

Public Health Reports
September/October 2016; 131 (5)
http://phr.sagepub.com/content/current
[Reviewed earlier]

Qualitative Health Research
October 2016; 26 (12)
http://qhr.sagepub.com/content/current
Special Issue: Responses to Care
[New issue; No relevant content identified]

Reproductive Health
http://www.reproductive-health-journal.com/content
[Accessed 1 October 2016]
[No new relevant content identified]

Revista Panamericana de Salud Pública/Pan American Journal of Public Health (RPSP/PAJPH)
Recently Published Articles - July
http://www.paho.org/journal/index.php?option=com_content&view=featured&Itemid=101
[Reviewed earlier]

Risk Analysis
September 2016 Volume 36, Issue 9 Pages 1683–1812
http://onlinelibrary.wiley.com/doi/10.1111/risa.2016.36.issue-9/issuetoc
Special Issue: Air Pollution Health Risks
Introduction to Special Issue on Air Pollution Health Risks (pages 1688–1692)
D. Warner North
Version of Record online: 27 SEP 2016 | DOI: 10.1111/risa.12707

Risk Management and Healthcare Policy
Volume 9, 2016
https://www.dovepress.com/risk-management-and-healthcare-policy-archive56

[Accessed 1 October 2016]
No new relevant content identified]

Science
30 September 2016 Vol 353, Issue 6307
http://www.sciencemag.org/current.dtl
EDITORIAL
The boldness of philanthropists
By David Baltimore
Science30 Sep 2016 : 1473
Summary
Last week, Priscilla Chan and Mark Zuckerberg announced their new philanthropic initiative with the goal of "curing, preventing, and managing all diseases by the end of the century." This may raise some eyebrows, but this effort—part of the $45 billion Chan Zuckerberg Initiative—joins forces with other philanthropists to push the envelope and support audacious ideas, with long-term commitments, to solve some of our greatest challenges.

Policy Forum
Growing pains for global monitoring of societal events
By Wei Wang, Ryan Kennedy, David Lazer, Naren Ramakrishnan
Science30 Sep 2016 : 1502-1503 Restricted Access
Automated event coding raises promise and concerns
Summary
There have been serious efforts over the past 40 years to use newspaper articles to create global-scale databases of events occurring in every corner of the world, to help understand and shape responses to global problems. Although most have been limited by the technology of the time (1) [see supplementary materials (SM)], two recent groundbreaking projects to provide global, real-time "event data" that take advantage of automated coding from news media have gained widespread recognition: International Crisis Early Warning System (ICEWS), maintained by Lockheed Martin, and Global Data on Events Language and Tone (GDELT), developed and maintained by Kalev Leetaru at Georgetown University (2, 3). The scale of these programs is unprecedented, and their promise has been reflected in the attention they have received from scholars, media, and governments. However, they suffer from major issues with respect to reliability and validity. Opportunities exist to use new methods and to develop an infrastructure that will yield robust and reliable "big data" to study global events—from conflict to ecological change (3).

Science Translational Medicine
28 September 2016 Vol 8, Issue 357
http://stm.sciencemag.org/
[New issue: No relevant content identified]

Social Science & Medicine
Volume 160, Pages 1-130 (July 2016)
http://www.sciencedirect.com/science/journal/02779536/160

[Reviewed earlier]

Tropical Medicine & International Health
September 2016 Volume 21, Issue 9 Pages 1059–1196
http://onlinelibrary.wiley.com/doi/10.1111/tmi.2016.21.issue-9/issuetoc
[Reviewed earlier]

Vaccine
Volume 34, Issue 43, Pages 5141-5208 (10 October 2016)
http://www.sciencedirect.com/science/journal/0264410X/34/43
Special Supplement: Polio Eradication Initiative Best Practices in the WHO African Region
Edited by Joseph Okeibunor, Bartholomew Dicky Akanmori, Richard Mihigo and Pascal Mkanda
[13 articles]
Introduction
Page 5141
Joseph Okeibunor, Bartholomew Dicky Akanmori, Richard Mihigo, Pascal Mkanda
The eradication of poliomyelitis has been a very long and arduous journey, which began in 1988, when the World Health Assembly adopted the goal of eradicating polio by 2000, but which has finally made substantive progress and prevented the paralysis of millions of children globally and especially in Africa. Four years ago African countries were responsible for more than half of the global cases of wide polio viruses (WPVs). The relentless efforts of countries in diligently implementing the strategies of the polio eradication initiative (PEI), with the support of WHO and partners, led to the eradication of WPV type 2 and certification through the Global Commission for Certification of Polio Eradication (GCC), in September 2015. The African Region has not detected any WPV type 3 for more than 40 months since the onset of the latest case in November 2012 from Nigeria.

The progress made in the eradication of polio is due to improvement in the implementation of the strategies, innovations in responding to outbreaks, strong leadership and unwavering commitment of national governments, involvement of traditional and community leaders and the dedicated partners, who never yielded even in the face many outbreaks but focussed on attaining polio eradication targets. Unprecedented courage, zeal and determination were exhibited by all workers in ensuring the timely delivery of polio vaccines to infants and children in the face of insecurity, some paying the ultimate price of losing their lives in the quest to achieve this public health feat.

This supplement documents the public health lessons learned and identifies some of the best practices, which can also be applied to other disease prevention, control and elimination programmes with similar success. The papers, written by those who were actively engaged in polio eradication, cover every aspect of the PEI, from preparedness and response to disease outbreaks, partnership with the military in Angola to reach children in remote areas, strengthening routine immunizations service delivery and provision of other interventions, strengthening communicable disease surveillance and laboratory capacity, transit vaccination, improving the health workforce and introduction of new vaccines.

The process of documentation started with visits by consultants to 8 countries (Angola, Chad, Cote d'Ivoire, the Democratic Republic of the Congo, Ethiopia, Nigeria, Tanzania, and Togo) between July 2014 and January 2015, who carefully collected and collated all the best practices through a series of interviews, review of programmes and documentation of activities. This exercise revealed several innovative public health practices to detect and respond adequately to outbreaks of polio viruses, which led to important results in polio eradication in the African Region. However many of these critical public health interventions are not widely known and have not been employed beyond polio eradication. The implementation of these best practices in Africa could strengthen immunization programmes and public health in general.

These innovative practices need to be shared with policymakers, communities and public health practitioners in Africa and around the world, and to also bring academic recognition to the public health workers involved in implementation. This is what the supplement seeks to achieve.

Vaccine
Volume 34, Issue 42, Pages 5049-5140 (30 September 2016)
http://www.sciencedirect.com/science/journal/0264410X/34/42
Regular Papers
Vaccine purchasing groups in the United States: An overview of their policies and practices
Original Research Article
Pages 5060-5065
Anne E. Cowan, Sarah J. Clark, Jennifer L. Gordon, Karin Bok, Angela K. Shen
Abstract
Background
Vaccine purchasing groups (VPGs) may help reduce the upfront cost of vaccines. The objective of this study was to describe key business practices of VPGs in the United States.
Methods
Semi-structured, qualitative telephone interviews were conducted with representatives from 11 VPGs, based on a sampling frame of 53 VPGs. Interviews were transcribed and summarized by topic.
Results
Characteristics of the 11 VPGs interviewed reflect the broader VPG population: 64% national vs 36% regional; 8% charge a membership fee; membership ranging from 40 to over 300,000 sites.
VPGs establish agreements with vaccine manufacturers, typically with either GlaxoSmithKline or Merck and Sanofi Pasteur; 1 VPG reported a single-product (Trumenba) agreement with Pfizer. VPG agreements specify "product loyalty" benchmarks (proportion of that manufacturer's product line) that the VPG and its members must meet to receive discounted vaccine pricing. The amount of discount is considered proprietary. Practices may actively participate with only one VPG; the member discount is automatically applied by the manufacturer at the time of ordering. Vaccine manufacturers monitor sales data to ensure compliance with product loyalty terms; practices that do not meet benchmarks may be removed from the VPG.
VPGs are paid administration fees by the manufacturers. VPGs use these fees to cover their operating expenses and often rebate a portion of these fees back to their members. All 11 VPGs offer additional services to members, ranging from immunization-focused education and technical assistance to discounts on a broad range of medical and business supplies.
Conclusions

VPGs can facilitate access to reduced purchase prices for most vaccines routinely recommended in the United States. Data on the magnitude of the price reductions were not publicly available. VPG members must balance loyalty-based price reductions against considerations of having a wider choice of vaccine products.

Vaccine: Development and Therapy
https://www.dovepress.com/vaccine-development-and-therapy-archive111
(Accessed 1 October 2016)
Review
Management of visceral leishmaniasis with therapeutic vaccines
Rawat K, Yadav NK, Joshi S, Ratnapriya S, Sahasrabuddhe AA, Dube A
Vaccine: Development and Therapy 2016, 6:33-45
Published Date: 28 September 2016

Vaccines — Open Access Journal
http://www.mdpi.com/journal/vaccines
(Accessed 1 October 2016)
[No new content]

Value in Health
July 2016–August 2016 Volume 19, Issue 5, p511-698
http://www.valueinhealthjournal.com/current
[Reviewed earlier]

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From Google Scholar & other sources: Selected Journal Articles, Newsletters, Dissertations, Theses, Commentary

No new content identified.

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Media/Policy Watch

This section is intended to alert readers to substantive news, analysis and opinion from the general media on vaccines, immunization, global; public health and related themes. *Media Watch* is not intended to be exhaustive, but indicative of themes and issues CVEP is actively tracking. This section will grow from an initial base of newspapers, magazines and blog sources, and is segregated from *Journal Watch* above which scans the peer-reviewed journal ecology.

We acknowledge the Western/Northern bias in this initial selection of titles and invite suggestions for expanded coverage. We are conservative in our outlook in adding news sources which largely report on primary content we are already covering above. Many electronic media sources have tiered, fee-based subscription models for access. We will provide full-text where

content is published without restriction, but most publications require registration and some subscription level.

The Atlantic
http://www.theatlantic.com/magazine/
Accessed 1 October 2016
[No new, unique, relevant content]

BBC
http://www.bbc.co.uk/
Accessed 1 October 2016
[No new, unique, relevant content]

The Economist
http://www.economist.com/
Accessed 1 October 2016
[No new, unique, relevant content]

Financial Times
http://www.ft.com/home/uk
Accessed 1 October 2016
[No new, unique, relevant content]

Forbes
http://www.forbes.com/
Accessed 1 October 2016
CDC's Frieden: Flu Vaccine Isn't Perfect, But It's The Best Tool We Have To Protect Ourselves
Rita Rubin, Contributor
Nearly half of all Americans 6 months of age and older were immunized this past flu serason, but an increase of only 5% this year could prevent hundreds of thousands more Americans from getting the flu, according to CDC Director Dr. Tom Frieden…

Foreign Affairs
http://www.foreignaffairs.com/
Accessed 1 October 2016
[No new, unique, relevant content]

Foreign Policy
http://foreignpolicy.com/
Accessed 1 October 2016
[No new, unique, relevant content]

The Guardian
http://www.guardiannews.com/
Accessed 1 October 2016
[No new, unique, relevant content]

New Yorker
http://www.newyorker.com/
Accessed 1 October 2016
[No new, unique, relevant content]

New York Times
http://www.nytimes.com/
Accessed 1 October 2016
[No new, unique, relevant content]

Wall Street Journal
http://online.wsj.com/home-page?_wsjregion=na,us&_homepage=/home/us
Accessed 1 October 2016
Politics
U.S. Spending Bill Frees Up $1.1 Billion to Fight Zika
By Stephanie Armour
Sep. 29, 2016 11:21 am ET
WASHINGTON—Legislation Congress cleared on Wednesday to keep the federal government running will free up $1.1 billion for efforts to research and treat the Zika virus, advance a vaccine and control mosquitoes.
The virus, which is mostly spread by mosquitoes, has infected more than 23,000 people in the U.S. and its territories.
Administration officials have warned that available funds to combat Zika were close to running out. The emergency funding was seen as critical to halting the spread of the virus, whose health risks include serious birth defects, pregnancy problems and a nervous system sickness.
When it comes to advancing a vaccine, the money means candidates who are in the first phase of a vaccine trial will be able to advance into a second phase. It will also allow vaccine trials on additional candidates, federal officials said…

Washington Post
http://www.washingtonpost.com/
Accessed 1 October 2016
CDC officials worry that new flu vaccine recommendations could reduce use
This year, the flu nasal spray is being discouraged, which might deter people from vaccinating children.
Lena H. Sun | National/health-science | Sep 29, 2016

Think Tanks et al

Brookings
http://www.brookings.edu/
Accessed 1 October 2016
[No new relevant content]

Center for Global Development [to 1 October 2016]
http://www.cgdev.org/page/press-center

Accessed 1 October 2016
[No new relevant content]

Council on Foreign Relations
http://www.cfr.org/
Accessed 1 October 2016
[No new relevant content]

CSIS
https://www.csis.org/
Accessed 1 October 2016
[No new relevant content]

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CVEP is a program of the GE2P2 Global Foundation – whose purpose and mission is to advance ethical and scientific rigor in research and evidence generation for governance, policy and practice in health, human rights action, humanitarian response, heritage stewardship, education and sustainable development – serving governments, international agencies, INGOs, civil society organizations (CSOs), commercial entities, consortia and alliances. CVEP maintains an academic affiliation with the Division of Medical Ethics, NYU School of Medicine, and an operating affiliation with the Vaccine Education Center of Children's Hospital of Philadelphia [CHOP].

Support for this service is provided by the Bill & Melinda Gates Foundation; Aeras; PATH; the International Vaccine Institute (IVI); and industry resource members Crucell/Janssen/J&J, Pfizer, PRAHS, Sanofi Pasteur U.S.,Takeda, Valera (list in formation), and the Developing Countries Vaccine Manufacturers Network (DCVMN).

Support is also provided by a growing list of individuals who use this membership service to support their roles in public health, clinical practice, government, NGOs and other international institutions, academia and research organizations, and industry.

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